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SYDNEY: SATURDAY, DECEMBER 21, 1918.

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No. 25.

THE QUEENSLAND HOOKWORM CAMPAIGN.

(First Progress Report, Covering Period April 17 to December 1, 1918.)

By J. H. Waite, M.D.,

Associate, Australian Institute of Tropical Medicine; Health Officer, Queensland Department of Public Health; State Director, International Health Board.

(1) Organization.

Acting upon the recommendation of the Australian Institute of Tropical Medicine relative to the prevalence and the serious economic importance of hookworm disease (anchylostomiasis) in tropical Australia, the Commonwealth Government in 1916 invited the International Health Board to extend its world-wide campaign against hookworm disease and soil pollution to Australian territory. After Papua had been surveyed in 1917, plans were laid to carry the work to Queensland, where numerous cases of the disease have been reported ever since 1889. To show its practical interest in the work, the Queensland Government, through its Health Department, contributed £1,552 as its portion of the expenses of a twelve months' campaign, and through its Department of Public Instruction provided all necessary facilities for the study of the effects of hookworm infection upon the mental development of school children. The Queensland hookworm campaign thus became an organic function of the Queensland Department of Public Health, conducted also under the advice of, and in close affiliation with, the Australian Institute of Tropical Medicine.

(2) The Problem Outlined.

Queensland, the second largest Australian State, has 53.5% of her 670,500 square miles lying within the tropics. The Great Dividing Range, parallel with the Pacific coastline and separated by 5 to 150 miles from it, divides the State into a wet and narrow

coastal belt and a dry and expansive interior country. The chief industries are sugar production within the coastal belt, metal and coal mining in the hill country and stock raising and farming in the interior. The density of population for the whole State is approximately one person to each square mile; but the larger settlements and the bulk of the population are found in the coastal districts. While the population is essentially of British stock, there are small numbers of Italians, Slavs, Chinese and Australian aborigines. The residue of the rapidly disappearing aborigines now numbers 16,600 souls, of whom about 5,000 are serving the white settlers on land and in towns. Tropical North Queensland, which has been developed for only four decades by white settlers, is lacking in comfort of dwellings and in sanitary conveniences so necessary for healthfulness in the tropics.

In the period from 1889 to 1917 inclusive, 925 cases of hookworm disease were recorded from all parts of Queensland, as follows:

Cases reported by medical practitioners to medical literature ..	115
Cases reported to the Queensland Department of Public Health ..	313
Cases treated at the Australian Institute of Tropical Medicine (estimated) ..	450

Cases in Cairns school children, found in 1912 by Dr. Bourne, School Medical Officer ..	47
Total ..	925

In 1916 a hookworm epidemic among aborigines was recognized clinically and combated at the Yarrabah Mission Station, near Cairns, and in the same year four deaths of aborigines from the Torres Straits Islands were ascribed to hookworm disease in the annual publication of the Chief Protector of Aborigines of Queensland. The need for a comprehensive effort to control hookworm disease has been urged and emphasized repeatedly by the Australian Institute of Tropical Medicine and the Queensland Department of Public Health.



Unit of Operation (Shaded Area); Coastal Belt, 280 miles; Six Settled Districts, 15,000 inhabitants.

The immediate aim of the Queensland hookworm campaign was to determine the extent and the severity of hookworm disease in Queensland and to relieve existing infection through continued treatment, while the ultimate objective was through applied sanitation to ensure the future control and prevention of hookworm and allied bowel diseases.

(3) The Extent of Operations.

The nature of the problem suggested that the most direct solution was to apply intensive methods throughout the wet coastal belt, where the most favourable conditions are afforded for the propagation of the disease, and to extend the work inland only upon evidence of infection derived from special surveys made as the opportunity offers.

(a) Special surveys during the past seven months were made of 2,417 Townsville school children, 171 children and adults from the tableland district west of Cairns and 311 Australian aborigines from camps and mission stations.

(b) The area selected for the intensive examination of the total population reached from Cooktown to Townsville, embracing 280 miles of coastal country, with 14,137 people living in six settled districts. There is no road or railway communication between the districts, and the only access to them is by sea. Each of the six settlements constitutes a shire, administered by its own body of local authorities, and within the Cairns area lies also the township of Cairns, with its town council. Therefore, irrespective of relative populations, the following seven units for intensive work were adopted:—

Unit.	Estim'd Area, Sq. Miles	Census.	Annual Rainfall.	Industry.	Sugar Mills.
Cooktown	4	835	71.6"		
Douglas Shire ..	100	870	82.9"	Sugar	One
Cairns Town ..	8	4,940	90.4"		
Cairns Shire ..	300	2,213	90-140"	Sugar	Three
Johnstone Shire ..	600	2,554	120-160"	Sugar	Three
Cardwell Shire ..	500	168	90-140"	Fruit	
Hinchinbrook Shire	500	2,557	90-120"	Sugar	Two
Total	2,012	14,137			Nine

(4) Headquarters and Personnel.

From a central office at Cairns, where all records were filed, the itinerant staff, with portable laboratory equipment, applied the intensive campaign to each unit in succession, and then re-visited five units, to follow up cases under treatment and sanitary improvement. A third and even a fourth visit to each unit will be necessary for the final completion of the work. The permanent staff consisted of the writer, four lay assistants and a boy. Temporary assistance in each unit was secured from the cane inspectors of the sugar mills and the sanitary inspectors of the several shire councils. Occasional assistance was given by members of the staff of the Australian Institute of Tropical Medicine, as follows:—

Dr. Breinl, one week at Cairns, three weeks at Innisfail;

Dr. Harris, three weeks at Ingham;

Mr. Fielding, six weeks at Cairns and Innisfail.

Inspector Wright, of the Queensland Department of Public Health, assisted at odd times.

(5) Handling the Population.

Work in each unit was opened by a public lecture, illustrated with lantern slides. The lecturer emphasized particularly that the disease can be controlled through sanitation. The entire staff then set to work, visiting each town and country house, making records of the total population, and especially of their sanitary conveniences, and distributing to each person a one-quarter ounce stool container, bearing the individual's name, age and house number. Leaflets describing the disease and its prevention were placed in the hands of each householder, and his personal attention was called to simple and inexpensive methods for making his closet safe. In due time the staff would collect the stool samples and examine the same, keeping careful records of all findings. Transportation through the sparsely populated and extensive districts was fortunately facilitated by the managers of the sugar mills, who kindly provided motor trolleys, with drivers, to convey the staff over the narrow-gauge mill tram-lines connecting with nearly every house. Where such transportation was not available, the staff utilized motor-car, horse, horse and trap, bicycle and walking.

(6) Technique of Stool Examination.

As soon as stools were collected they were examined as follows: With the aid of a toothpick, about 0.1 gramme of faeces is emulsified in 0.3 c.cm. of water on a 5 cm. \times 7.5 cm. glass slide, the emulsion being smeared over a 3.75 cm. \times 6.5 cm. surface. Examination of the wet smear without a cover glass is then made, a $\frac{2}{3}$ objective and a 7.5 or 10.0 eyepiece being used. In case no hookworm ova are found in two successive plain smears, a centrifuged preparation is made. With a toothpick 1.0 gramme of faeces is emulsified in a tin cone with 6.0 c.cm. of water, and the emulsion is poured into a glass tube 7.5 cm. \times 0.9 cm., corked at one end. After corking the other end of the filled tube, it is fixed in its proper position, according to its number in the pan-head, which is especially designed for this work and which accommodates twenty tubes at one time. Centrifugation by hand for one minute at 300 revolutions per minute is sufficient to throw down the larger particles in the stool, including the hookworm eggs, which are imbedded with other detritus upon the outer cork. To examine, the inner cork should be carefully removed, the fine stool suspension decanted and the sediment smeared in water as before in two portions upon two large slides. A negative diagnosis is made in case no hookworm ova are found after careful search through both smears of the centrifugate. The method is therefore one of fractional centrifugation, and it combines speed with reasonable accuracy.

(7) Summary of Results.

(a) The Extent of Hookworm Disease.

Hookworm infection was found in 21% of the total population.

	Intensive Campaign.	Special Surveys.	Total.
Census	14,137	..	..
Away from Home ..	242	..	..
Solicited	13,895	..	..
Refused	2,217 = 15.9%	..	..
Examined	11,678	2,899	14,577
Hookworm Infected	2,623	445	3,068 = 21%

(b) The Severity of Hookworm Disease.

(1) Anæmia.—The measurement by Tallqvist of

1,322 infected cases showed an average hæmoglobin of 72.9% and a minimum of 20% in badly infected cases. A hæmoglobin of 70% or less was found in three-fifths of 892 infected school children who were tested.

(2) Arrested physical growth and arrested sexual development, the outcome of prolonged anæmia in growing children, is conspicuous in the Cairns and Innisfail districts. Prolonged severe hookworm infection gives the hookworm dwarf the immature body of a child, with infantile genitalia, absence of secondary sexual characteristics, and the relief of the disease in these cases gives the most remarkable results in the immediate growth of body and maturation of sex.

(3) Mental retardation to the extent of two years was demonstrated by the results of applying the Binet-Simon and the Porteus mental tests to 159 heavily infected school children and comparing such results with those obtained similarly from 116 hookworm free children coming from the same homes and attending the same schools as the hookworm infected children.

(8) Hookworm Infection by Unit Districts.

Unit.	Examina- tions.	Hookworm Infections.	Per cent.	Annual Rainfall.
Cooktown	712	77	10.8%	71.6"
Douglas Shire .. .	801	132	16.4%	82.9"
Cairns Town .. .	4,116	730	17.7%	90.4"
Cairns Shire .. .	1,676	423	25.2%	90-140"
Johnstone Shire ..	2,182	539	24.7%	120-160"
Cardwell Shire ..	167	72	43.1%	90-140"
Hinchinbrook Shire	2,024	650	32.1%	90-120"
Townsville Schools	2,417	182	7.5%	49.28"
Cairns Tableland ..	171	25	14.6%	
Mission Aborigines	311	238	76.5%	
Total	14,577	3,068	21.0%	

The amount of hookworm infection runs parallel with the amount of rainfall in the several districts, and it also reflects the amount of the soil pollution

luting the ground everywhere, show a total infection rate of 76.5%.

(9) Refusals to Co-operate.

There was a considerable proportion of the population (15.9%) which refused voluntarily to supply stool specimens for examination.

Age Group.	Solicited.	Refused.	Per Cent. Refusals.
0 to 5 years.. ..	2,396	232	9.6%
6 to 18 years.. ..	4,213	325	7.7%
19 to 40 years.. ..	4,746	1,004	21.1%
41 to 60 years.. ..	2,192	555	25.3%
Over 60 years.. ..	348	101	29.0%
All ages	13,895	2,217	15.9%

The only way to overcome prejudice of ignorance permanently is through education and persuasion. No less than 1,359 people who refused to co-operate at the first opportunity took advantage of their second chance. In like manner we hope to persuade the remaining 2,217 people during our third and fourth visits to submit specimens for examination.

(10) Hookworm Infection by Ages.

The results of the intensive campaign show 40% of all children from six to eighteen years of age to be infected, which is largely the outcome of the widespread habit of running barefoot, and thereby affording the hookworm larvæ in the polluted soil every chance for entering the body through penetration of the skin. A very light hookworm infection rate was found (7.5%, or 182 cases out of 2,417 examinations) in Townsville school children, and this is chiefly responsible for the low infection rate shown for this group in the "special survey" column. The other groups in the "special survey" column seem to show an unduly high rate, which is really the result of including 311 aborigines, with 76.5% infection.

				Intensive Campaign.		Special Surveys.		Total.	
All Ages	Examined	.. ..	11,678	22.4%	..	2,899	15.3%	14,577	21.0%
	Infected	.. ..	2,623						
0 to 5 years.. .. .	Examined	.. ..	2,164	17.2%	..	42	45.2%	2,206	17.8%
	Infected	.. ..	374						
6 to 18 years.. .. .	Examined	.. ..	3,888	40.0%	..	2,678	10.9%	6,566	29.6%
	Infected	.. ..	1,555						
19 to 40 years.. .. .	Examined	.. ..	3,742	14.3%	..	146	80.1%	3,888	16.8%
	Infected	.. ..	537						
41 to 60 years.. .. .	Examined	.. ..	1,637	9.1%	..	26	53.8%	1,663	9.8%
	Infected	.. ..	149						
Over 60 years.. .. .	Examined	.. ..	247	3.2%	..	7	42.8%	254	4.3%
	Infected	.. ..	8						

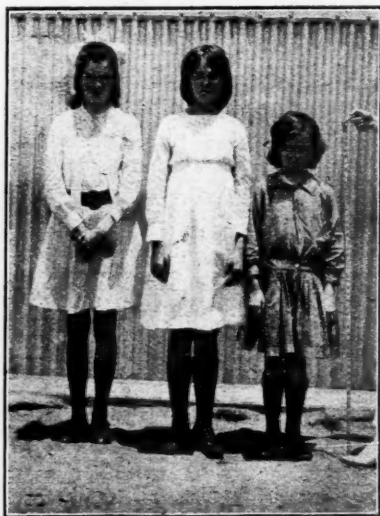
prevailing in the different communities. For example, the sugar-growing areas—the Cairns, Johnstone and Hinchinbrook Shires—having wretched sanitary conveniences and no scavenger services, show infection indices of 24.7% to 32.1%, while the township areas—Cairns and Cooktown—with safer closets and with scavenger services, show only 17.7% and 10.8% of their total populations infected. On the other hand, the insanitary aborigines, through the habit of pol-

(11) Hookworm Infection by Race.

The striking facts to be learned from this analysis are the massive infection rates in Italians and Australian aborigines, resulting from and reflecting their utter carelessness in sanitary matters. Both of these classes prefer to soil the ground with excrement rather than dispose of it in a safe manner. An additional factor producing much infection is the habit both these classes have of going about barefoot. Like

negro races in other parts of the world, the Australian aborigines seem to possess a relative immunity toward the ill-effects of hookworm infection. They are, however, none the less dangerous from a public health viewpoint as distributors of the disease among white communities.

British Stock	{ Examined .. 13,521 Infected .. 2,559 }	18.9 %
Italians ..	{ Examined .. 435 Infected .. 191 }	43.9 %
Chinese ..	{ Examined .. 218 Infected .. 12 }	5.5 %
Aborigines ..	{ Examined .. 403 Infected .. 306 }	75.9 %
All Races ..	{ Examined .. 14,577 Infected .. 3,068 }	21.0 %



	Hookworm-Free.		Hookworm.
	Case 38.	Case 117.	Case 403.
Age, actual ..	12.0 years	13.6 years	13.0 years
Height	59.0 inches	59.5 inches	50.7 inches
Weight	92.0 lbs.	90.0 lbs.	66.25 lbs.
Hæmoglobin ..	90 %	90 %	75 %
Age, mental, by Binet	11.2 years		10.6 years

(12) Parasites Other Than Hookworms.

No special attempt was made to search for parasites other than hookworms, and the foregoing results were obtained incidentally in our routine stool microscopy. The "dwarf tapeworm," *Hymenolepis nana*, was encountered in 51 cases, and it is of special interest.

Total Examinations..	14,577
Hookworm Infections ..	3,068
<i>Ascaris lumbricoides</i> ..	18
<i>Trichuris trichiura</i> ..	183
<i>Strongyloides intestinalis</i> ..	19
<i>Oxyuris vermicularis</i> ..	75
<i>Hymenolepis nana</i> ..	51
<i>Balantidium coli</i> ..	2

(13) Treatment of Infected Cases.

Hookworm Infections ..	3,068
Cases Given First Treatment ..	3,046 = 99.7 %
Cases Not Treated—	
Refused ..	8
Removed ..	6
Medical Reasons ..	8
Treated Cases Re-examined ..	1,370
Cured Cases ..	924 = 67.4 %*

* Of those re-examined.

The oil of chenopodium was given to all infected persons after they had been examined by the writer for contra-indications, such as cardiac disease, acute infections of the abdomen, late pregnancy and senile debility. The drug was administered in freshly-prepared hard gelatine capsules for adults, and for small children it was advised that the drug be poured into jam or sugar, to facilitate swallowing. The procedure of treatment consisted in giving the patient his medicine with printed directions, and reliance was placed upon his ability to follow to the letter the advice contained therein. Since the population is an intelligent one, this method was found satisfactory.

- In the evening, before going to bed, the patient should take a dose of magnesium sulphate.
- After purgation the next morning, the patient should take the proper dosage of chenopodium, which is two drops for each year of age up to 40 drops, the maximum dose. For persons over 60 years of age, and for severe anemics, the dosage is reduced.
- The patient should take a liberal dose of castor oil no later than one hour after the chenopodium treatment.

While some people complained of burning in the stomach, nausea and vertigo, severe toxic symptoms appeared in only two persons who failed to follow the drug with the castor oil and thereby allowed absorption. A second treatment followed the first after a one week interval, and was administered in the same manner. No sooner than two weeks after the second treatment the patients were re-examined to determine the result of treatment, the microscopic technique described above being used, and, if uncured, the person received additional treatments.

To show the results following cures, the following contrasts after three months are characteristic:—

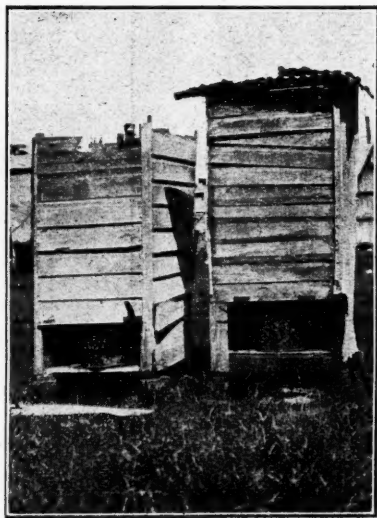
Name.	Age.	Before Treatment.			Three Months After Cure.		
		Weight.	Height.	Hæmoglobin.	Weight.	Height.	Hæmoglobin.
P.M.	18	84 lb.	5' 0"	70 %	95 lb.	5' 3"	85 %
H.D.	19	84 lb.	4' 10"	60 %	87 lb.	4' 11.5"	90 %

An endeavour is being made to measure the improvement in treated and cured cases—a work that will require considerable time. In general, there is marked improvement physically and mentally following treatment, and it is the subject of comment by parents and teachers and patients themselves.

(14) Educational Effort.

The prevention of hookworm disease by interception of the life cycle of the worm through sanitation is theoretically easy, but practically most difficult, because the common people are ignorant of the need for sanitary reform. Law alone can never compel men to practice sanitation, unless it is aided by an enlightened "sanitary conscience" in both individual and community. Therefore, our major objective has been the sanitary enlightenment of the mass of people through the following educational efforts:—

- (a) Shop window exhibits of actual hookworms, with enlarged lithographs, showing worm anatomy, ova and larvæ, hookworm dwarfs, safe and unsafe closets.
- (b) Nine public lectures, illustrated with stereoptican views, were given to 4,300 people. Emphasis was placed upon the danger of soil pollution and the need for safe closets and the use of the same.



Chinatown, Cairns. Before Alteration.

- (c) Twenty-one school lectures, with charts especially prepared for school children, were given to 4,000 pupils.
- (d) Microscopic demonstrations to adults and school children in each settlement were given, showing hookworm eggs and live larvæ. This feature is effective indeed, but particularly so when an infected case can observe the evidence in his own stool.
- (e) Press campaigns were undertaken in each district where there was a newspaper.
- (f) Descriptive articles to the official publications of the Queensland Department of Pub-

lic Instruction, which go into nearly every home. For the larger children an illustrated article was supplied, upon which they can write essays. For the smaller children a hookworm catechism of simple questions and answers was given as a regular exercise in school.

- (g) Five thousand pamphlets for public distribution were issued.

- (h) The dramatic benefits following cures make a powerful appeal to the populace, particularly parents, to take every precaution to prevent future re-infections, which are sure to follow soil pollution with infective excrement.

(15) Sanitary Improvement.

The initial sanitary inspection throughout the intensive area found:—

82 homes without closets of any sort ..	2.7%
2,825 homes with unsafe closets	93.5%
116 homes with safe closets	3.8%
<hr/> 3,023 homes inspected	

The fact that 96.2% of North Queensland homes had either unsafe closets or none at all was due en-



Chinatown, Cairns. After Alteration.

tirely to ignorance of the public, and not to the lack of sanitary laws. The Queensland *Health Act* clothes the local authorities of each shire or township with every authority to enforce safe sanitary conveniences; pail closets are specified and pit closets are forbidden.

In conformity with the *Health Act*, the staff recommended pail closets with fly-tight, animal-tight pansteads, with automatically closing seat lid and service trapdoor. The second sanitary inspection in several of the units found 1,310 closets safe—an alteration which represents an expenditure of about £1,500 made voluntarily by the householders. In the Cook-

town and Cairns townships, out of the 1,389 closets in use, 1,150 (or 82.7%) are now safe and the remainder are being made safe. In the five other units, each body of local authorities has hired a corps of carpenters, and it is systematically remodelling all closets in its area, and collecting from the householders *pro rata* the cost thereof.

Possession of a safe closet is of no avail, provided there is no use made of it. In North Queensland, fouling of the ground with excrement is practised chiefly by children and negroes, the very ones who can do the most harm, on account of their high hookworm infection. If all classes of people in North Queensland can be taught to use the safe closets after they are once obtained, hookworm disease and allied bowel infections will be kept in complete control.

A NEW OPERATION FOR UTERUS BICORNATE.

By A. Norman McArthur, M.B., B.S., M.R.C.S., L.R.C.P.,
Senior Gynaecological Surgeon to In-Patients,
St. Vincent's Hospital, Melbourne.

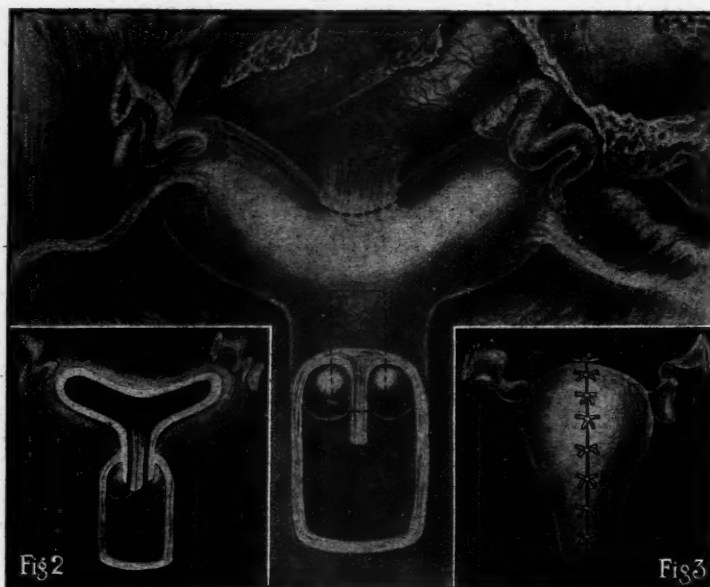
A very interesting case of "double uterus" was received in my ward for relief by operation. I say "double uterus" because there were two distinct uterine cavities and bodies, with a certain amount of fusion of the cervixes and lower part of the bodies only. There had been almost a complete vaginal septum, which had been removed previously by another surgeon. The patient was an unmarried girl, age 29, working as a parlour-maid, but for three days during each month she was almost completely incapacitated with marked dysmenorrhea. The menses lasted for seven days, with many clots. It was only because she had an indulgent mistress that she was able to keep her place. On examination, it was quite obvious that the septum had been removed nearly the whole length of the vagina, and the two cervixes and the two *ora* could be readily seen as in the semi diagrammatic picture shown in Figure I. The right and left bodies of the uterus could be easily felt by bimanual examination. As the bodies diverged from the fused cervixes there was a distinct angle, which rendered it impossible to pass a sound or

eurette into either body. I, therefore, devised an operation, which I think is original, as I can find no record of it having been suggested before, and by reference to the figures as I give, step by step, the procedure of the operation I think will be made manifest.

I.—I proceeded by an intra-vaginal operation to cut out completely somewhat less than the inner half of the cervixes. The incision goes through antero-posteriorly, leaving the outer halves of each cervical canals. A remnant of the vaginal septum was also excised. That area of cervixes excised is diagrammatically shown by dotted parallelogram (Figure I.). The result of such an excision is shown in Figure II. The posterior edges of the right and left cervical canals were then united, as were the anterior edges, making one cervix and one cervical cavity.

II.—Intra-abdominal operation was then undertaken, and here a congenital defect was soon found. The mesentery of the sigmoid flexure had continued from the pelvis, and was attached between the juncture of the two uterine bodies as shown in Figure I. This was not an adhesion, but a definite mesentery. Perhaps this congenital defect had prevented the Müllerian ducts fusing in their upper segments during fetal life.

III.—Removal of this mesentery by dissection was a simple process, and it was replaced in a normal position. I had intended to bisect the whole of the inner half of each uterine body, but I thought I would first split the uteri open and see the result. I introduced the knife into the cavity at the fundus of the right uterus, carrying the knife through the cavity to the left *fundus uteri*. The in-



cision is indicated by dotted line in Figure I.

IV.—There was, of course, still a portion of the septum between the two uterine bodies that had not been reached by the vaginal route, but it was a very easy thing to excise that septum.

V.—I saw there was marked hypertrophic endometritis of each uterine body, but as the two bodies appeared just as if they were the two halves of one uterus, it was very easy to curette the endometrium of the two halves. This was done practically outside the abdomen.

VI.—The rest of the procedure was extremely simple. It was simply sewing up the two uteri just as one would sew up the two halves of a split uterus, and when the stitching was complete, the uterus presented an absolutely normal form, appearance and size as is seen in Figure III.

It is now over a year since I operated on this patient. She has menstruated with perfect regularity and perfect comfort, and has no menstrual pain at all. The result is most encouraging. I realize that the symmetry of the case was remarkable. On one occasion I had to do subtotal hysterectomy as both cornua were markedly infiltrated with fibroids. In another one, in which I assisted some years ago, the surgeon removed one cornu, and the dysmenorrhea was worse than ever. I think the method that I suggest can always be adopted, even where the uteri are unequal in size, as a better uterus can be built up by a little intelligent plastic work than can be done by simply excising the smaller cornu, besides both ovaries and tubes are preserved, and their position becomes a normal one.

Reports of Cases.

SOME UNUSUAL SURGICAL CASES.¹

By Rupert Magarey, M.B., B.S. (Adel.),
Acting Assistant Gynaecologist, Adelaide Hospital.

Intestinal Obstruction Due to Meckel's Diverticulum.

Case I.—J.H., *et.* 20, male, was seized with sudden severe abdominal pain while playing football. The pain made him fall to the ground and vomit, but after a time he was able to limp home, a distance of about a mile. The pain continued all night, "like paroxysms of stomach-ache," but he did not again vomit. His bowels had moved that day as usual, but no further bowel action had occurred up to the time he was seen next morning.

On examination, eighteen hours after the onset of pain, he was lying easily in bed, rather apologetic for having sent the message to call, as he "only had a stomach-ache," not in any obvious pain, but with an occasional short paroxysm. His temperature was 36.6° C. and pulse-rate 72. The respiration was easy. The tongue was clean and moist. His heart and lungs were normal. The abdomen was flat and moving freely with respiration. There was no abnormal dullness or resonance. There was some slight tenderness over the right rectus muscle, below the umbilicus. The attack was called appendicular colic, for want of a better name, but there did not seem to be sufficient evidence to justify operation. He was kept in bed, starved and ordered an enema.

Next morning the report was that he had had very slight result from the enema, that he had been easier for a few hours after it, but that the pain came on again during the night in paroxysms, gradually increasing in severity and always referred to the navel; and that he had vomited once or twice during the night greenish-yellow fluid. He had had no bowel action. On examination, the temperature was still normal and the pulse-rate 80. The abdomen was still quite flat and without any definite tenderness or fullness. The urine was clear, in good quantity, and without albumin or sugar. He was ordered calomel (0.3 gm.), and the district nurse was called in to give a turpentine enema. This she did twice during the day without result, and without even the passage of flatus.

Early next morning the patient's father came to say that he thought something had happened during the night, as the boy was much worse and vomiting a lot of "black stuff." This sounded serious, and I rang Dr. Hone to come with me to see him. At first glance it was evident that a desperate change had taken place. He was now evidently seriously ill, with drawn face and rapid breathing, in obvious severe pain, and vomiting every few minutes. He had vomited about 2½

litres of watery fluid, with dark brown specks in it and with a faintly faecal odour. The temperature was subnormal, the pulse-rate 120 and the respiratory-rate 30. The abdomen had become rather full, rather tense and tender, but with no localized tenderness and with no area of abnormal dullness. *Per rectum*, an indefinite general fullness could be felt pressing down on to the examining finger through the anterior rectal wall. The hernial orifices were all normal. An intestinal obstruction of unknown origin was diagnosed and exploration advised.

At operation, an hour or two later, the abdomen was opened in the mid-line, below the umbilicus. Distended coils of small intestine presented, and on following this down a loop of plum-coloured small bowel was found, about 22.5 cm. in length and constricted at each end of the loop. This constriction was found to be due to the loop of bowel having found its way through an aperture formed by the mesentery, bowel and a Meckel's diverticulum growing from the free edge of bowel. To the free end of the diverticulum was attached a cord-like adhesion, the end of which was, in turn, adherent to the base of the mesentery. Thus the mesentery, bowel, diverticulum and adhesion formed a completely closed circle through which the constricted loop of bowel had passed. The adhesion was divided, and the bowel at once began to take on a nice rich red colour, and was without any evidence of gangrene. The diverticulum, which was the size and length of a man's thumb, was removed and the stump treated by a purse-string suture, like an appendix stump, not without some trepidation, on account of its size. The patient's condition, however, did not allow of any more elaborate stitching. The abdomen was then closed. He made an uneventful recovery.

Meckel's diverticulum is said to be the cause of intestinal obstruction in 6% of all such cases. In this case the diverticulum was of rather unusual size, and the complete circle formed by the mesentery, bowel, Meckel's diverticulum and its attenuated, cord-like extremity was, I should think, rather unique.

Fallopian Tube Incarcerated in a Femoral Hernia.

Case II.—This case I am recording only because, in the volume on gynaecology of the 1917 "Practical Medicine Series," edited by Dudley, a case of femoral hernia is quoted in which the Fallopian tube was found. It is claimed that this is the first case recorded. The case is reported by E. G. Renny in the *Lancet*, October, 1916.

My case occurred some six years ago, and I have always kept it in mind as a surgical curiosity, but had no idea that there were no cases in medical literature.

Mrs. G., *et.* 38, a multipara, had had a small lump in her groin for some years, but had not troubled about it, as it gave her no pain and usually disappeared when she lay down. One morning she sent an urgent message, as she had severe pain in this lump, and the lump would not disappear as usual when she lay down. She had twice vomited. The pain had come on suddenly about eight hours previously.

On examination I found that her general condition was good. In the right saphenous opening was a rounded, tense swelling, the size of a pigeon's egg, very tender to pressure and without impulse on coughing. A strangulated femoral hernia was diagnosed and operation advised.

At operation a right femoral hernia was found quite irreducible, and on opening the sac, which was full of blood-stained fluid, the fimbriated end of the Fallopian tube (apparently the right side, as far as one could judge) and about 5 cm. of the distal end of the tube were found incarcerated in the hernia. The tube was red and congested, but still shiny; it could be returned to the abdominal cavity only after nicking Gimbernat's ligament. The sac was isolated and tied high up, and an attempt made to close the femoral ring by stitching pectineus to Gimbernat's and Poupart's ligaments, because the natural ring had been nicked. The patient got quite well.

A Case of Pure Streptococcal Intraperitoneal Abscess.

Case III.—Mrs. K., *et.* 54, was first seen on May 10, when she gave the following history. Five days previously she had been quite well, when she was suddenly seized with violent pains of a colicky nature all over her abdomen. These continued intermittently every day for four days, but she continued to go about her work until the fifth day, when she went to bed because the pain was very severe, and she had had some shivering. She had had no vomiting, had eaten her ordinary food, and her bowels had moved each day. She

¹ Read at a Meeting of the South Australian Branch of the British Medical Association on September 26, 1918.

had no cough or shortness of breath, and no pain anywhere, except in her abdomen. There was no micturition trouble.

The past history was good. She could not remember having had any serious illness. She had not recently had influenza (which was then prevalent). She had never had a similar attack of pain, and had never been jaundiced. She had had 14 children; the youngest was 15 years old. There had been no miscarriages since the last child. The menopause occurred two years ago.

On examination the patient appeared to be moderately comfortable, but lay with her knees drawn up. Her temperature was 38.8° C., pulse-rate 110 and respiratory-rate 30. The apex beat of the heart was indistinct; the sounds were best heard in the fifth space, 2.5 cm. inside the nipple line. The sounds were clear at the apex and base. Lungs: the expiratory murmur was somewhat prolonged, but there were absolutely no adventitious. Abdomen: the abdominal wall was fat, but there was no abnormal fullness. The liver moved well and equally with respiration. There was no abnormal dullness. On palpation one felt at once just below and to the left of the umbilicus a smooth, rounded tumour, the size of a polo-ball, which was movable, but was too tender to allow of much manipulation. It appeared to be quite distinct from and unconnected with any pelvic organ or any organ in the upper part of the abdomen.

A vaginal examination revealed a small, senile uterus, with normal adnexæ, which were all quite free from the abdominal tumour.

She was sent to the Adelaide Hospital. Next day, when seen at the hospital, her temperature had fallen to 37.8° C.; the previous night it was 36.6° C. when seen, and the pulse-rate 100 and respirations 28. The urine had a specific gravity of 1.024, was acid and contained neither albumin nor sugar. As the mass was still present and acutely tender, it was decided to give her an anæsthetic to facilitate the examination and, if necessary, to operate.

Under ether the tumour could be moved to any part of the abdomen within a radius of about 5 to 6 cm. from the umbilicus. It was moderately smooth to the touch, was not attached to the anterior abdominal wall, and could be definitely differentiated from the liver and gall-bladder, kidneys and by vaginal examination from the pelvic organs. The diagnosis seemed to be between a suppurating hydatid of the omentum, an appendix abscess caused by an appendix attached to a very freely movable and swinging caecum or, as a remote possibility, a pneumococcal peritonitis. It was decided to operate.

Operation.—The abdomen was opened in the mid-line immediately below the umbilicus. The appendix was found in the right iliac fossa, and was normal. The uterus and its appendages were normal. The gall-bladder was palpated and nothing abnormal found. The mass was then examined and found to be unattached to the anterior abdominal wall. While palpating it it burst and exuded greenish-yellow pus without odour. The cavity containing the pus was formed by a coil of small intestine and its mesentery closed in in front and below by adherent omentum. Only a few centimetres of bowel were involved, and no sign of any diverticulum could be found on it. The cavity was sponged dry; no mesenteric glands could be felt. As the general peritoneal cavity had been soiled, the abdomen was drained through Douglas's pouch and a large tube was inserted into the abscess cavity through the abdominal incision and the wound closed.

The cavity drained freely for some time, but no general peritonitis occurred, and ultimately the wound closed and she was discharged well seven weeks after the operation. Pus collected at operation contained streptococci only. A piece of the adherent omentum showed a subacute inflammatory reaction.

Keen, in his book, "Surgery," says: "The sources of peritoneal infection come almost without exception through the walls of the cavity or from some one of the intra- or extra-abdominal viscera. It is well established that bacteria may migrate through the wall of the intestine that has been very slightly damaged. It has not been proved that they pass through the healthy wall. Certain rare infections are apparently hæmatogenous, but probably some better explanation will eventually be found." One is at a loss to explain the origin of the infection in this case, except by the rather abused term, "hæmatogenous"; if it were hæmatogenous, being streptococcal, one would surely expect some other signs or symptoms, local or general, to have developed or to have

been previously present. The patient's present health denies the former supposition, and her past history, very closely gone into, denies the latter.

ANOTHER UNIQUE CASE OF STILL-BIRTH.

By Edmund H. Lindsay, L.R.C.S.I., L.R.C.P. (Edin.),
Ouyen, Victoria.

Dr. Cuthbert Hall, of Parramatta, records in the *Journal* of October 5 a peculiar case of still-birth.

I have had one of a similar nature quite recently. The mother was a young woman with her fourth pregnancy. The labour was a comparatively short one, and delivery was easy. The child had the cord twice round the neck, once round the body, and there was a knot in it; this latter condition I had never seen before.

The cord was a very long one. The mother stated that the fetal movements had been very active until five days previous to the birth.

Reviews.

OPERATIVE SURGERY.

Volume II. of E. Doyen's "Surgical Therapeutics and Operative Technique"¹ is devoted to regional surgery and operations on the head, thorax, upper and lower limbs.

The first one hundred and fifty odd pages are given up to a description of the author's methods of operating upon the jaws and tongue, the surgical treatment of cleft palate, hare-lip and various plastic procedures upon the lips and face.

The author then goes on to deal with the surgery of the neck and head, including operations in the cervical segment of the vertebral column. The thorax as a whole is then dealt with, including the "dorsal spine." The remainder of the book, some 226 pages, is devoted to the surgery of the limbs—upper and lower—as practised by the author.

One notices in connexion with the operative treatment of carcinoma of the breast (page 351) that the author urges the use of anti-carcinomatous vaccine, both before and after operation, and that this treatment should "be combined with the use of thermic electro-coagulation of the thermo-electric bath." Again (page 355): "Before making the first incision it will be well to mobilize the peri-mammary integuments by grasping the breast firmly between the two hands and forcibly displacing it in every direction, as if we wanted to tear it away from the thorax." Surely neither of these procedures is likely to be followed by the scientific surgeon of the present day.

In dealing with the surgery of the thyroid gland, the author claims to have completely revolutionized the methods of A. and J. Reverdin and of Th. Kocher. The ablation of a parenchymatous goitre of the size of the fist lasts for three to five minutes; the extirpation of a large tumour fifteen to twenty minutes, inclusive of the subsequent ablation of the bilateral cervical glands, which habitually complicate the presence of malignant tumours (pp. 192 and 193).

No mention is made of the X-ray treatment in cases of exophthalmic goitre.

In connexion with the surgery of the thorax and its contents, some of the work advocated by Doyen is fully justified by the experiences of military surgeons during the present war.

With regard to the surgery of the limbs, there is little which calls for special comment.

To sum up, as was the case with Volume I., the reviewer fails to find a justification for the publication of Volume II. of Doyen's work. It cannot be recommended as a text-book for students, and the general surgeon of experience will find so much in it with which he cannot agree that the volume is scarcely likely to find an abiding place in his surgical library.

The publishers, Messrs. Baillière, Tindall & Cox, are to be congratulated on their share in the work. The illustrations are well executed and numerous.

¹ Surgical Therapeutics and Operative Technique, by E. Doyen; English Edition, prepared by the Author in collaboration with H. Spencer-Browne, M.B., etc.; 1918. London: Baillière, Tindall & Cox, Ltd.; Volume II.; Large Royal 8vo., pp. 682, with 982 illustrations. Price, 25s. net.

The Medical Journal of Australia.

SATURDAY, DECEMBER 21, 1918.

The Profession and the Services.

Since the cessation of hostilities there is a tendency abroad on the part of the citizen to turn away from military and naval matters as rapidly as possible, and to press into the foreground those civilian problems which have been held more or less in abeyance during the progress of the war. It is true that many peace propositions have of necessity been neglected during the past four and a half years, and that the normal peace time advances in hygiene and scientific medicine has been materially slowed. These matters must be brought prominently before the medical profession, and an attempt must be made to deal energetically with the large sociological problems. But it must not be forgotten that the medical profession has yet many duties to perform in connexion with the safety of the Empire. In the first place, it should be remembered that we are not yet at peace. When the armistice is terminated and peace is signed, the medical profession will still have the task of handling vast numbers of sound and unsound soldiers on their return to Australia and in their transit from military to civil life. The Navy still requires a full supply of medical officers for the performance of various duties. We need not refer in this place to the importance of our sea forces in the closing chapters of the gigantic struggle. The medical service of the Australian Navy has been re-organized and changed from an indifferent service into one of first-class efficiency. This is entirely due to the excellent management and far-seeing ability of Fleet-Surgeon A. C. Bean, D.N.M.S.. We regret to find that he is still in need of energetic and competent surgeons for his service. In the next few months the medical officers of both services will pass to and fro between Europe and the Commonwealth, and will be called upon to engage in strenuous duties. All this entails a continued strain on the members of the Naval and

Military Medical Services and to a less extent on the civilian medical practitioners in the Commonwealth. Our attention to these paramount duties is required, even if this should entail a further postponement of otherwise urgent civilian matters.

In addition to the pressing needs of the moment in regard to naval and military services, the medical profession should not lose sight of the fact that the time is at hand for the proper maintenance of the two national medical services on a peace footing. The Army Medical Corps must not be allowed to relapse into its pre-war condition. A healthy, active and efficient service must be kept standing, ready for any future emergency. Medical practitioners should accustom themselves to the idea that an annual training is not a sacrifice to be undertaken by the few. It should form part of every able-bodied, healthy-minded medical practitioner's life, until age renders him of little use for this kind of work. There is no insuperable difficulty to the introduction into each practitioner's yearly routine of certain services performed in the public interest. It is a privilege which those who acquire knowledge and skill in our medical schools, should grasp eagerly. We do not advocate anything approaching conscription, but we claim that it should be regarded as a matter of honour that every graduate should offer himself to the authorities for naval or military service, and that he should take a living and active interest in the service of his choice for the remainder of his professional career.

THE SIGNIFICANCE OF THE HOOKWORM CAMPAIGN.

In the present issue we publish the first of two articles by Dr. J. H. Waite, on the results of his investigations in Northern Queensland into the extent and severity of hookworm invasion of the community. A few of the facts have already been stated in these columns (see *The Medical Journal of Australia*, November 16, 1918, page 411), and the necessity has been emphasized of instituting a permanent service, through whose agency the dangers of faulty sanitation and careless habits may be removed. There can be no second opinion in regard to the value of the work which Dr. Waite has carried out with such assiduity and competence. Neither can anyone doubt the im-

portance of teaching the people in the affected areas, and, indeed, the people throughout Australia, how to avoid intestinal infections. We learn from this investigation that hookworm infection is very prevalent in those districts of Northern Queensland visited by Dr. Waite and his small staff. It is not an unreasonable assumption that this dire malady is undermining the health and efficiency of our people in many other parts of the Commonwealth. Serious as this is, we should not close our eyes to the fact that the hookworm survey, and the measures adopted to combat it, have a wider significance than the mere eradication of this affection. The prevention of hookworm infection comprises the avoidance of contact with infected material. By insisting on the establishment of safe latrines and closets, and by a continued lesson on the proper way of using these latrines, the population is provided with a means of reducing the incidence of enteric fever and other intestinal infections. A careless and ignorant people, such as the aborigines and the Italians of North Queensland, need prolonged control and constant supervision before their dangerous habits of depositing their excrement in any but the proper place can be broken down. We have ample evidence that properly constructed latrines, with fly-tight lids to the pans, are relatively rare in very many districts throughout the Commonwealth. It may be that the presence of hookworm infection is a fortunate occurrence in a district, for it enables the investigator to demonstrate the necessity of control of stools, the advantages of rendering every latrine safe and the almost magical effect of treatment scientifically applied.

It is satisfactory to note that the Federal Government is prepared to carry into effect a substantial part of what we advocated in these columns a few weeks ago. It was announced in the House of Representatives on December 13, 1918, that the Federal Government was prepared to find the sum of £35,000 for a continuance of the survey for five years, provided that the Queensland Government would contribute a similar amount. The Queensland Government has now agreed to provide its quota. It will be remembered that the Rockefeller Foundation offered to supply the experts necessary for these campaigns in any country where ancylostomiasis is rife, and to

bear a proportion of the expenses. The amount forthcoming for the five years' work in North Queensland from the Foundation is £30,000. This will yield an aggregate sum of £100,000, which is required for the work which has been begun so efficiently to be continued on a proper basis.

THE TUBERCULOSIS PROBLEM.

The ingenious statistical investigations carried out by Dr. Brownlee on behalf of the Medical Research Committee of the National Health Insurance in Great Britain, if confirmed by bacteriological evidence, must lead to a radical modification of our conception of the epidemiology of pulmonary tuberculosis. In his arguments supporting the assumption that there exists a number of types of tubercle bacilli which have a marked affinity for persons at different periods of life, Dr. Brownlee levelled some adverse criticism at the methods adopted by Dr. E. L. Collis, whose work on the industrial pneumokonioses is well known. From the statistician's point of view, it would appear that some of the objections raised were well founded, although it is doubtful whether Dr. Brownlee's arguments suffice to dispose of the propositions put forward by Dr. Collis. In May of this year Dr. Collis again attacked the problem of the relation of industrial employment and pulmonary tuberculosis at a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine.¹ In this contribution he calls particular attention to the difficulty of obtaining information concerning every individual employed in each calling, and the impossibility of collecting an accurate census of those exposed to infection. He has, therefore, had recourse to what is known as the method of proportionate mortality. This method consists in ascertaining the causes of death in a sufficient number of persons whose occupation is known, without considering the number among whom these deaths have occurred. If the deaths be classified according to age periods, the percentage of all deaths due to a special disease at each age-period can be stated. His prolonged studies of the relations of occupation and disease leads him to express the opinion that the diversity of industrial environment presents unique opportunities for studying the influences which determine the mortality of such a disease as pulmonary tuberculosis. He finds that the association of a high mortality from tuberculosis with the presence of a high mortality from other diseases may direct attention to the influences which determine the former. He shows that curves plotted for the age-periods for each occupation reveal variations which suggest the effect of predominating influences. He is further convinced that more information can be obtained from morbidity curves than from mortality curves. This opinion is shared by eminent actuaries, but he admits that at present it is difficult to apply. He suggests that, with the advent of a Ministry of Health, the information on which such statistics may be compiled, should be available, and he also pro-

¹ *Proceedings of the Royal Society of Medicine*, Vol. XI., No. 8, June, 1918.

poses that the proportionate method should be applied to the figures obtained in this manner. Even the whole-hearted adherents of the theory enunciated by Dr. Brownlee will agree with Dr. Collis that the question should be exhaustively investigated with the view to the determination whether industrial environment does or does not play an aetiological rôle in pulmonary tuberculosis.

AN EXPERIMENT IN DIETARY.

During the course of the war the greater part of the world was placed on short rations. In Australia the community experienced nothing of the deprivations and hardship required of the non-combatants in all European countries and, during the last years of the war, in the United States of America. The food production and supply of the world was short and, since it was of national importance that our fighting men should have a diet that would enable them to perform the strenuous tasks imposed on them, it followed that the non-combatants were limited to a diet actually below the full requirements of normal people in the time of plenty. The British food control was planned on a physiological basis, and an attempt was made to enable each individual to obtain a diet containing a sufficient number of food calories necessary for the maintenance of a healthy activity. But, notwithstanding the expert guidance of eminent physiologists, the Food Controller apparently made no attempt to educate the public in regard to the food value required for the performance of light, moderate and heavy work. In April of this year Dr. F. G. Benedict told the members of the American Philosophical Society of the results of an interesting series of experiments he had carried out at the Nutritional Laboratory of the Carnegie Institution of Washington.¹ He set out to ascertain what would be the effect on a number of students when their diet was restricted to such an extent that their body weight was reduced by one eighth, and when this body weight was maintained at the same level for a considerable time. The students were volunteers, and submitted to the rigid conditions of the experiment for four months without a complaint. They continued uninterruptedly with their studies and physical activities. Twelve men were experimented on at a time, while a second dozen acted as controls. The reduction in weight was completed in from four to six weeks. The experiments were controlled by observations in the large calorimeter, by a continuous record of the body weight and by a chemical control of the metabolic level. Prior to the experiments the men were consuming a diet representing from 3,200 to 3,600 calories. During the reduction stage the men tolerated a diet of 1,400 calories without experiencing any special disturbance. After the weight had been reduced by 12%, a diet containing 1,950 calories was required to maintain this weight. The actual heat output during sleep was approximately one fourth lower than normal, while when calculated per kilogram body weight and per square metre of body surface, the reduction of heat output represented 18%. The men lost approximately 150 grammes of nitrogen

each during the period of reduction and for some time after. During the stage of maintained reduced weight the daily output of nitrogen was about 10.5 grammes. The nitrogen output was about 19 grammes in the control men. The pulse rate was greatly reduced, and the blood pressure was lowered. The skin temperature was also lowered, but the rectal temperature was not modified. The deductions drawn from the results of the experiments are that in times of stress, when the need for food conservation is required for the upkeep of enormous armies in the field, every individual at home should contribute to his nation's safety by living on short rations. It is possible to perform manual and intellectual work on a restricted diet.

Dr. Benedict is convinced that even when there is no national need for food conservation, the individual will do well to restrict his diet to some extent. But while the war lasted, he held the opinion very strongly that persons were not doing their duty to their country who remained over-weight.

British Medical Association News.

MEDICO-POLITICAL.

The following sub-committees have been appointed by the Council of the Victorian Branch at its last meeting:—

Organization Sub-committee: Drs. Allan Robertson, A. V. M. Anderson, S. Argyle, L. J. Balfour, W. R. Boyd, B. Crellin, J. R. Davis, R. H. J. Fetherston, A. N. McArthur, J. N. Morris, W. H. Summons, J. F. Wilkinson and D. Rosenberg.

War Organization Sub-committee: The duties of this sub-committee have been transferred to the Organization Sub-committee.

Press Sub-committee: Dr. Alex. Lewers and Dr. J. F. Wilkinson.

Ethical Sub-committee: Drs. A. V. M. Anderson, L. J. Balfour, F. L. Davies, T. E. L. Lambert, Alex. Lewers and Basil Kilvington.

Legislative Sub-committee: Drs. B. Crellin, S. Argyle, F. L. Davies and J. N. Morris.

House Sub-committee: Dr. C. H. Mollison.

Scientific Sub-committee: Drs. Alex. Lewers, S. Argyle, T. E. L. Lambert, Basil Kilvington, K. Hiller, Allan Robertson and H. D. Stephens.

Medical Agency Sub-committee: Dr. W. Kent Hughes, B. Crellin, Basil Kilvington, C. H. Mollison and Allan Robertson.

The following appointments were also made:—

Honorary Assistant Secretary: Dr. Alex. Lewers.

Honorary Assistant Treasurer: Dr. E. Robertson.

Representative of the Bush Nursing Association: Dr. H. D. Stephens.

Member of the Advisory Board to the Medical Inspectors of Schools: Dr. H. D. Stephens.

Dr. Colin Hasler Martin (M.B., Ch.B., 1915, Univ. Melb.), Langwarrin Camp, has been elected a member of the Victorian Branch.

The following have been elected members of the New South Wales Branch of the British Medical Association:—

Dr. Vernon Leopold Bowman (M.B., 1909, Ch.B., 1910, Univ. Melb.), Henty, New South Wales.

Dr. Philip Sidney Parkinson (M.B., 1914, Univ. Syd.), 130 Edwin Street, Croydon.

The following have been nominated for membership of the New South Wales Branch:—

Dr. Walter Leopold Calov (M.B., Ch.M., 1918, Univ. Syd.), Toowoomba Hospital, Queensland.

Dr. Frank Norman Waddell (M.B., Ch.M., 1918, Univ. Syd.), Chesterfield Road, Epping.

¹ *Journal of the Royal Army Medical Corps*, August, 1915.

Abstracts from Current Medical Literature.

MEDICINE.

(214) Pneumonia at a Base Hospital.

A. A. Small reports that at the Base Hospital at Camp Pike, Ark., from September, 1917, to April 27, 1918, there were admitted 1,285 pneumonia patients; 857 of these had lobar pneumonia and 428 had broncho-pneumonia (*Journ. Amer. Med. Assoc.*, August 31, 1918). In September and October, the cases of lobar pneumonia were typical. There was sudden onset, with rigors, high temperature, rusty sputum, and well marked areas of consolidation. The cases of broncho-pneumonia were essentially the same as those seen in civil practice. The total percentage of deaths in lobar pneumonia was 28 and in broncho-pneumonia 26. In November the mortality from lobar pneumonia was 32%, and, in January, that of broncho-pneumonia 53%. A large number of cases of broncho-pneumonia followed measles. Many of the later cases of broncho-pneumonia began with the most trivial subjective symptoms and practically no objective signs. Many of the patients on entrance to hospital said they were not ill, and should not have been taken from their duty. The only subjective complaint might be a slight non-productive cough. Later examination might show well-marked consolidation, with increased number of moist râles and broncho-vesicular or tubular breathing. Fever was rarely above 39.4° C. The large majority of these patients did not present any respiratory distress. There was practically no dyspnoea until dissolution approached. Cyanosis was rare and seen only in about 2% of the fatal cases. At first there was no expectoration; it gradually became more free. It was never rusty, but might be streaked with blood. Occasionally the amount of blood was so extensive that it might have been mistaken for hemoptysis, due to tuberculosis of the lung. In contra-distinction to this mild type there was a malignant or fulminating type. A private was drilling in the afternoon and complained of feeling slightly ill. He entered hospital at 7 p.m., and died at 6 a.m. His only signs were a few moist râles distributed over both lungs. He had headache, depression, hyperæsthesia, and stiff neck suggestive of meningitis. Post mortem patches of broncho-pneumonia were found in both lungs, but no meningitis. Empyema occurred in 9% of the total number of pneumonia cases. It was, in some cases, impossible to detect the presence of pus, especially when an isolated abscess cavity was formed by adhesions between the pericardium and the visceral and parietal layers of the pleura near the median line. In other cases the pus was contained in a fibrinous exudate, which acted like a sponge, confining the pus and limiting its bor-

der. During October and November, 90% of the pneumonia patients had herpes; later it was practically unknown. Many patients were received in hospital with the diagnosis of meningitis; the error being only proved by spinal puncture. Some simulated appendicitis. Jaundice was not infrequent. Pneumothorax occurred in a few cases. Two cases were diagnosed as such from the remarkable coin sound; at the necropsy, however, it was found that the coin sound was due to a distended colon and pneumothorax did not exist. Of the sputum examinations, 48% of the pneumonias were due to pneumococcus (types I, II, and IV.). Streptococci were found in 46% of the total number of cases—54 being hemolytic and 46 non-hemolytic. *Streptococcus hemolyticus* was found in six out of 23 blood cultures taken.

(215) Streptococcal Pneumonia at Iowa.

J. L. Miller and F. B. Lusk relate their experiences of pneumonia and empyema at Camp Dodge, Iowa, from September 20, 1917, to May 10, 1918 (*Journ. Amer. Med. Assoc.*, August 31, 1918). The ordinary lobar pneumonia due to pneumococcus prevailed to about March 20; then, abruptly, the streptococcus type prevailed, with a very great increase in the incidence of the disease. It was immediately recognized that the type of pneumonia was different. Evidence of severe intoxication appeared early; empyema became frequent and developed early. Two patients, who entered the hospital with pleural exudate, had been drilling on the previous day. The development of an exudate was often very difficult to determine by the ordinary physical findings, aided by X-ray examination, and it became necessary to resort to frequent exploratory aspirations. These were often repeated several times before the fluid could be localized. The exudate contained numerous polynuclear leucocytes and short chain streptococci. In 95 of these exudates, pure streptococci (all hemolytic) were found, in 88 pneumococci combined with streptococci were found in three, two of type II. and one of type I. Pneumococci, without streptococci, but often with other bacteria, were found in four cases, one of type I, two of type II. and one of type IV.. As an aid to early diagnosis and exact localization of the lung involvement, X-ray examination was found of great value. It was of much less assistance in differentiating between consolidated lung and pleural exudate, although, when repeated frequently and compared with ward findings, it proved to be of great value. In the beginning an order was issued that every patient suspected of pneumonia was to be examined by X-rays within twenty-four hours. As clinical evidence of complete consolidation was far from constant, the skiagrams gave accurate data regarding the incidence of the lobe first involved. Empyema developed in 34.8% of the cases during the epidemic, as contrasted

with 11% before the epidemic. Suppurative peritonitis and suppurative pericarditis occurred in some cases. Among the coloured troops there was a strikingly smaller tendency to empyema and pericarditis. The mortality in 142 streptococcus empyemas was 60.4%. The mortality in 346 streptococcus pneumonias was 32.5%, as compared with 11% in the previous pneumococcus type. Suppurative otitis media as a complication was common, but arthritis was not. Erysipelas developed in a few cases. All patients were placed in special pneumonia wards, each bed separated by a sheet suspended from a wire, with 1,000 cubic feet of air space for each patient. No attempt was made to reduce temperature by bathing. Morphine was given for pain, or to control restlessness. Tincture of digitalis was given from time of admission until the crisis, unless toxic effects developed. The patients with empyema due to streptococci may be divided into three groups; (1) those who die early from acute toxæmia no matter what form of treatment is adopted; (2) those with multiple pus foci, difficult to detect on account of the inability to localize and drain all foci—these all die; (3) those who usually recover, either from early operation or aspiration followed by operation. Among them are included those with moderate toxæmia and those with localized pus accessible to drainage.

(216) Modes of Invasion in Pulmonary Tuberculosis.

J. O. Cobb reviews this subject, considering only inhalation and ingestive methods and disregarding all minor avenues of entrance of the bacillus (*Journ. Amer. Med. Association*, May 25, 1918). He considers the possibility of foreign matter being inhaled directly into the air vesicles, or of reaching the lungs through the intestinal tract. His conclusions are that pulmonary tuberculosis, in man as well as in animals, is primarily an infection of the lymphatic vessels and lymph glands in the lungs. Cough and expectoration are late manifestations of the disease. It is a fair assumption that infection in man and animals is commonly by the ingestion method. Even where the bacillus is planted on the respiratory mucous membranes by means of dried sputum or by dried feces, as is often the case with cattle, the anatomical path is still by the intestinal tract, for the reason that the number of bacilli that would be swallowed under such conditions is out of all proportion to the very doubtful number that might possibly reach the air vesicles by inhalation. This does not lessen the potential danger of infected dust, as much of this dust would be swallowed, even though planted on respiratory mucous membranes by inhalation. All portions of the lungs, in man and in animals, are invaded with dust and tubercle bacilli in equal measure, whether the route be through the trachea or through the intestinal tract. The lower, as well as the upper, peribronchial glands are equally pigmented in anthracosis, and Röntgeno-

grams show the same involvement in early tuberculosis. Pigmentation and infection of the lower lobes in man do not appear until the defences of the peribronchial glands are permanently damaged. No portion of the lung possesses a specific biochemical constituent that would sensitize it to the tubercle bacillus, nor does the bacillus possess selective properties for any special portion of the lung. Whatever exact reason exists for the constant invasion of a specific area in the lungs of man and cattle, the causes for this point of election must be wholly physico-anatomic.

NEUROLOGY.

(217) The Symptoms of Acute Cerebellar Injuries.

Gordon Holmes (*Brain*, Part IV., 1917) has utilized the unique opportunities afforded by the war to study the symptoms of acute lesions of the cerebellum, and in a long paper discusses his findings in over 40 cases. (1) The effects of cerebellar injuries fall almost exclusively upon the motor system, and one of the most prominent symptoms is loss or diminution of tone in the muscles of the limbs of the same side. There is a striking flabbiness of the muscles; they can be stretched to an unusual extent. The affected limbs may flop about like a flail, and may assume unnatural postures. (2) In these flabby, toneless muscles there is a degree of asthenia, rather than paresis, a slowness in contraction and relaxation. The patients complain that a limb is "useless," and prefer to avoid its use. The muscles tire easily, and yet the actual strength is little affected. (3) There is pronounced irregularity in voluntary movement, loosely described under the term "ataxia"; well described by a patient thus: "I do not seem to have the power to do what I want with my hand. If I want to bring it to my mouth I only hit my eye with it; it is drunk; it will not go straight." Analysing "ataxia" more closely, Holmes breaks it up into a combination of (a) decomposition of movement into its separate elements, (b) asynergia (imperfect control of agonists, antagonists and fixating muscles), (c) dysmetria (movements are not correctly adapted or proportioned to their aim; they are ill-measured), (d) tremor, (e) deviation from the line of movement. (4) Another phenomenon absent in acute cases is the "rebound phenomenon." When the patient elbows are supported on a bed or table, and he is asked to pull each hand in succession towards the mouth against resistance, if this resistance be suddenly withdrawn the hand of the affected side flies to his mouth or shoulder, whereas the normal limb is arrested, even rebounds. (5) Adiadochokinesis (Babinski), another characteristic and well-known feature of cerebellar lesions, is studied by Holmes, and ascribed to disturbances of the range of movement,

and to a slowness in initiating each excursion of the limb, while the occurrence of adventitious movements noted in the usual tests is partly due to the lack of proper co-operation on the part of those muscles which should fix other joints of the limb, and partly to irregular, purposeless contractions of muscles of other groups. (6) The patient invariably falls in Bárány's pointing test, and the involuntary deviation of the affected arm is almost constantly outward. (7) Abnormal attitudes are neither constant nor striking. (8) In standing, the patient often feels pulled over as by an invisible hand, towards the side of the wound. His attitude is striking; his head and trunk are both inclined to the injured side and his spine is concave to it, but his pelvis is so tilted that his weight falls chiefly on his opposite foot. A gentle push easily throws him over to the side of the lesion, and he cannot stand on the affected leg alone. In walking the first and most striking feature is the patient's obvious fear of trusting himself on the affected leg. He stumbles or deviates towards the affected side, which may be seen when crawling on all fours. These patients are surprisingly successful in maintaining equilibrium, despite their deficient control of movement, hence to regard the cerebellum as an organ mainly concerned with the maintenance of equilibrium is incorrect. (9) For some days after a gunshot wound of the cerebellum, the eyes, while at rest, are generally deviated towards the opposite side. "Skew deviation" may be present. Nystagmus is so constant that it must be regarded as a clinical symptom of the highest importance. It is essentially a fixation nystagmus, and is not due to injury of the labyrinth. (10) A slow, drawing and monotonous speech is sometimes noticed; (11) There are no constant changes in reflexes; (12) Sensation, in particular the "muscular sense," does not suffer. Finally, the writer brings forward no facts on the localization of function, saying that, through his observations lend no support to the theory of focal localization of function in the cerebellar cortex, they cannot be accepted as proof that such localization does not exist. Views on localization of function possess little value unless preceded by anatomical examination.

(218) Familial Progressive Muscular Atrophy.

Arthur S. Hamilton points out that the Werdnig-Hoffman type of familial progressive muscular atrophy of childhood is a well-recognized condition. The same cannot be said of this affection in adults (*Journ. Med. Nerv. Dis.*, August, 1918). He gives a review of the literature and excludes a number of cases recorded under this heading as not being true atrophies. In a few cases a complete clinical and pathological investigation has established the proper classification of the condition. The author adds to the literature a full case report of a case occurring in a

male, aged 30 years, whose maternal grandmother, three aunts and possibly one uncle suffered from a similar affection. The duration of the illness was a little over one year, and the first symptom was a weakness of the muscles of the anterior aspect of the left thigh and severe pain in the muscles of both extremities and the back. Post-mortem, in addition to congestion of the kidneys and arteriosclerosis, the characteristic changes of a chronic, progressive atrophy were found. In the muscles grossly affected the fibres were swollen and their nuclei greatly increased, while others were broken up, small or even lacking. Perivascular lymphocytic infiltration was well marked in places, and in the sections stained by Marchi's method some of the isolated fibres were filled with black granules. Lymphocytic infiltration was also found in the spinal cord, scattered throughout its length, while changes in the myelin sheaths, with swollen or absent axis cylinders, were met with. The anterior and lateral horn cells and the cells of Clarke's column were fewer on the left than on the right side, and the persisting ganglion cells showed a high degree of degeneration. In the cervical and thoracic regions degenerative granules were demonstrated by the Marchi stain, while other characteristics were noted in sections stained by the Weigert and the Pál-Weigert methods. In discussing the proper classification of these changes, the author meets the arguments used by Lövegren in reporting a case of chronic anterior poliomyelitis. He holds the opinion that the cases reported are instances of true progressive muscular atrophy.

(219) Muscular Atrophy in Tabes Dorsalis.

Léri and Ehlers (*Rev. Neurol.*, Nos. 3 and 4, 1918), remark that in tabes, amyotrophy of some degree and affecting various parts is not uncommon; most frequently it is localized, e.g., to muscles of the lower extremity, particularly those below the knee; at other times it appears as a more or less generalized atrophy, after the Aran-Duchenne type. It is rare for the atrophy to be confined exclusively to muscles of the shoulder girdle, namely, the trapezius and the pectoral muscles, and more rare for it to be bilateral, as in the case they report. It is to be noted that the muscles affected differ in their innervation, the trapezius being supplied from the cervical, the pectorals from the brachial plexus. Concerning the pathology of muscular atrophy in tabes, rarely is the condition a primary dystrophy, with point of attack direct upon the muscles. Almost always it may be referred to one of three things: (1) a meningo-radculitis affecting the anterior as well as the posterior roots, i.e., an extension forwards of the typical lesion of tabes; (2) a superimposed peripheral neuritis; or (3) a syphilitic lesion of the anterior cornua. In the case reported the first speculation is favoured.

Medical Matters in Parliament.

The Venereal Diseases Bill was introduced into the Legislative Assembly of New South Wales on November 28, 1918, and read for the first time.

The Premier, Mr. W. A. Holman, moved the second reading upon December 4, 1918. He said that the fundamental proposal of the measure was that of compulsory treatment for those suffering from these diseases. Those suffering from venereal diseases would be placed under strict penal obligation to subject themselves to treatment until they received certificates of cure. This was an innovation in legislation, and he felt bound to say at once that it could not claim the recommendation of the British Royal Commission which had sat in Great Britain. The traditions of the British people were against so grave an interference with individual freedom, but he ventured to put the proposal before honourable members on its merits and on the common sense of the case. They had given full consideration to the question and to all the arguments against the course they proposed, but he believed that the feeling of the country was that, whatever disadvantages there might be to the course they proposed, the time had come when a concerted effort must be made to stamp out this plague by compelling under penalties the treatment of every case. The view that he wished to put before members was that, probably for the first time in the history of medical science, they were in a position to say that there was a fair prospect of eradicating the disease. Until recent years they could not assert definitely that there was any final or satisfactory manner of treatment of these diseases when they reached a certain stage. He was, however, a layman placing before them the opinion of those best qualified to judge of the cure of these conditions.

In order to bring about compulsory treatment, they were providing for compulsory notification. The notifications were to be anonymous to the extent that the names of the patients were not to be revealed. The chief objection to compulsory notification in Great Britain was based on its uselessness, because there was no benefit derived from it, unless compulsory notification is followed by compulsory treatment. As they objected in Great Britain to compulsory treatment, they hesitated to accept compulsory notification. Having decided that treatment must be enforced, they proceeded to the inevitable corollary of the position, that treatment must be free when it was so desired. It was made an offence for any person other than a qualified medical man to attend upon or prescribe for or supply any drug or medicine to any person suffering from venereal disease, except that a qualified chemist could supply drugs on the authority of a medical man. The general principle was that treatment of the diseases was confined to medical men. Medical evidence seemed to be unanimous and overwhelming that the one necessity was to treat these diseases in their early stages. When a man left himself in the hands of a quack for three to six months, it might well be too late for a qualified medical man to do him any good. After some consideration the Government had agreed to the clause permitting a registered pharmaceutical chemist to attend upon and prescribe for certain persons under regulations drawn up by the Director of Public Health. He realized that there would be some difference of opinion as to the wisdom of that course.

A third principle in the Bill was the prohibition of marriage while suffering from venereal disease. He expected no difference of opinion as to the wisdom of this principle. Another clause provided a penalty for knowingly infecting another person. There would be room for a difference of opinion on this clause, as some would consider that the clause pressed heavily upon one sex and acted against defenceless numbers of that sex. In conclusion, he paid a well-deserved tribute of gratitude to Dr. Arthur, who had worked strenuously to put the Government into action to attack the evil by bringing sufferers within the region of medical research and achievement.

Mr. G. Cann pointed out how necessary compulsory examinations had been for eradicating venereal diseases in the army. He did not know how they would overcome the diffidence of the civilian population. It would be necessary to educate the public as to the utility of such examinations. He saw no reason why medical examinations of persons about to be married should not be enforced throughout the community.

Dr. R. Arthur dealt with the ravages of venereal diseases, and impressed on members the distressing scenes that they might witness in hospitals and mental asylums. In addition to prevention, there was the important question of the early recognition of the disease, followed by prompt, efficient and scientific treatment. Syphilis, when caught early, was an eminently curable disease.

In order that the disease should be recognized early it was necessary that those seeking to diagnose the condition should be equipped with the latest instruments of scientific research. Gonorrhoea could only be truly diagnosed by microscopic examination. To induce men and women to come forward for treatment early the Government should carry out campaigns of instruction and warning. He would instance the placards placed in urinals throughout the Railway Department. Similar placards should be similarly displayed in factories and workshops. He would urge honourable members to dismiss from their minds the idea that gonorrhoea was an insignificant complaint. Gonorrhoea needed treatment by men with experience, who knew it in all its stages. There was a belief that this disease might be treated by chemists, but there was never a more mistaken belief in the world. He took the gravest exception from the standpoint of the general public and of the interests of future generations of children to the novel proposal that chemists should be authorized by law to treat cases of what the Premier had called minor forms of venereal disease. He was of opinion that steps were necessary to provide facilities for treating patients if the Bill were to be successful. The few thousand pounds on the Estimates were not sufficient for this purpose. A very large sum had to be found straight away to provide the necessary hospital buildings. He instanced the case of Royal Prince Alfred Hospital. When the special clinic was opened three years previously the number of patients increased to 700 who attended regularly. It was found impossible to treat these patients with the accommodation provided, and the Directors had been reluctantly forced gradually to diminish the number of persons who would be accepted for treatment. The number at present accepted for treatment was 200. At this hospital they were turning away 30 to 70 patients every week. At the Sydney Hospital the accommodation was hopelessly inadequate. The Bill would become a dead letter if accommodation was not provided for treating patients.

Mr. J. Wright thought that power should be given to arrest those conveying the disease to others and detaining them for treatment. He hoped that chemists who had knowledge of these diseases would be permitted to pass an examination and then to treat these diseases.

Mr. P. Brookfield hoped that the Government would make an arrangement with medical men in country towns for the treatment of sufferers. A person would be put to much unnecessary hardship if they had to travel a considerable distance to a clinic or hospital when they might have received treatment from a local medical practitioner.

Mr. A. G. Manning thought that no marriage should be celebrated unless both the contracting parties could produce certificates of health showing that they were free from any taint of venereal disease. He also thought that the medical attendant should be forced to reveal the existence of venereal disease to husband or wife in the case of married persons.

Mr. W. J. McKell made a lengthy speech in opposition to some provisions of the Bill. He urged that notification failed to show the extent of the disease in the community, and that the results of notification in other States were quite misleading as measures of the amount of venereal diseases. He thought that the community should be informed of the use of preventive measures against venereal disease in the pamphlets that were being issued for distribution for educational purposes.

Mr. J. Storey supported the Bill, and the debate was adjourned on the motion of Mr. Bagnall.

On the resumption of the debate on the second reading upon December 5, 1918, Mr. J. Dooley protested against notification, on the ground that it would defeat the object of the Bill to ensure treatment.

Mr. R. J. Stuart Robertson thought that the definition of venereal diseases was not sufficiently wide. He wished to introduce a form of words that would include all kinds of venereal disease. He had visited Royal Prince Alfred Hospital to see the clinic, and was surprised to find that the patients did not look ill. He strongly supported the Bill.

Mr. C. C. Lazzarini thought that provision should be made for the isolation of some persons suffering from these diseases. He hoped that in committee the clause permitting chemists to treat patients would be modified.

The question of the second reading was resolved in the affirmative and the Bill was read a second time.

(To be Continued.)

THE VENEREAL DISEASES BILL OF NEW SOUTH WALES.

The following is the text of the *Venerable Diseases Bill*, as amended in the Legislative Assembly and Legislative Council of New South Wales. The Bill in the form in which it was introduced is given. All words and passages omitted are placed in brackets, while all additions are printed in italics.

Be it enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the Venerable Diseases Act, 1918.
2. In this Act, if not inconsistent with the context or subject-matter,—

"Child" means a person under the age of sixteen years.

"Commissioner" means the Commissioner [holding office or] appointed under this Act.

"Manager" includes board, committee, or other body managing any hospital.

"Medical practitioner" means legally qualified medical practitioner registered in New South Wales.

"Minister" means the Minister of Public Health or the Minister for the time being administering this Act.

"Prescribed" means prescribed by this Act or by regulations under this Act.

"Venereal disease" means gonorrhœa, *gleet*, gonorrhœal ophthalmia, syphilis, soft chancre, venereal warts, or venereal granuloma.

3 (1) [Except as provided in this section, no] No person other than a medical practitioner, or a person acting under the direct instructions of a medical practitioner, shall attend upon or prescribe for or supply any drug or medicine to any person suffering from any venereal disease for the purpose of curing, alleviating, or treating such disease.

(2) A registered pharmaceutical chemist may dispense to the patient of a medical practitioner the prescription of such practitioner if such prescription is dated, and bears the address and usual signature (including the surname) of such practitioner.

(3) A registered pharmaceutical chemist may, in the ordinary course of business, sell or supply any drug or medicine (except such drugs or medicine as are specified by regulations made under the Act) if such drug or medicine is not prescribed by such chemist for any person suffering from any venereal disease for the purpose of curing, alleviating, or treating such disease.

[(4) A registered pharmaceutical chemist may attend upon or prescribe for persons suffering from such venereal diseases other than syphilis as may be prescribed by regulation, provided that he does so in the manner and according to the regulations prescribed.]

(4) [(5)] Any person contravening this section shall be liable to a penalty not exceeding fifty pounds or to imprisonment with or without hard labour for a term not exceeding six months.

4. (1) Every person suffering from any venereal disease, or suspecting that he is so suffering, shall within three days of becoming aware of his condition, consult a medical practitioner thereon, furnish his correct name and address to such practitioner, and place himself under treatment by such practitioner, or shall attend at some hospital or other place prescribed for the purpose and place himself under treatment thereat.

(2) Any person contravening the preceding subsection of this section shall be liable to a penalty not exceeding [twenty] one hundred pounds, or imprisonment for a period not exceeding three months.

(3) Any medical practitioner who otherwise than in accordance with the provisions of this Act communicates to any person or in any other way makes known any name or address so furnished to him shall be liable to a penalty not

exceeding one hundred pounds, and shall be deemed to be guilty of professionally infamous conduct.

5. (1) Every person suffering from any venereal disease who has consulted and placed himself under treatment by a medical practitioner, or who has attended and placed himself under treatment at a hospital or other prescribed place, shall (until he has received a certificate that he is cured of or is free from venereal disease) visit or cause himself to be attended by a medical practitioner, or attend at a hospital or other prescribed place, for the purpose of treatment and advice at least once in every such period as is prescribed, and shall follow the advice given by such medical practitioner or by a medical practitioner at such hospital or place.

(2) Any person contravening this section shall be liable to a penalty not exceeding twenty pounds.

6. (1) If any person suffering from any venereal disease who has consulted and placed himself under treatment by a medical practitioner changes his address he shall, within seven days, notify the said practitioner of such change, and of the address to which he has gone.

(2) Any person contravening this section shall be liable to a penalty not exceeding five pounds.

7. (1) If any person suffering from any venereal disease who has consulted and placed himself under treatment by a medical practitioner desires to discontinue such treatment and to place himself under treatment by some other medical practitioner, or if the medical practitioner treating such person dies or for any reason is unable or unwilling to treat him further, such person shall, unless he places himself under treatment at some hospital or other prescribed place, forthwith consult and place himself under the treatment of another medical practitioner, and inform him of the name and last known address of the medical practitioner by whom he was previously treated. The medical practitioner so informed shall forthwith send to the medical practitioner by whom such person was previously treated a notice in the prescribed form if the practitioner last mentioned is resident in New South Wales.

(2) Any person contravening this section shall be liable to a penalty not exceeding five pounds.

8. The fact that a person who has been suffering from any venereal disease has ceased to be liable to convey infection, but has not been cured, shall not exonerate such person from complying with the provisions of this Act with respect to treatment, or any medical practitioner from complying with the requirements of this Act with respect to notices.

9. (1) If a medical practitioner becomes aware that any person consulting him, or attended, or treated by him, is suffering from any venereal disease, such medical practitioner shall give notice thereof to the Commissioner in the prescribed form, and within the prescribed period.

(2) Such notice shall not disclose the name and address of the patient.

(3) Any medical practitioner contravening this section shall be liable to a penalty not exceeding twenty pounds, and for a second and every subsequent offence to a penalty of not less than twenty pounds, but not exceeding one hundred pounds.

10. (1) If a person suffering from any venereal disease who has been attended or treated by a medical practitioner for such disease fails to consult or attend such medical practitioner during one such period as is prescribed under section five of this Act or within ten days thereafter, and the medical practitioner has not before the expiration of such ten days received from another medical practitioner a notice that such person has placed himself under treatment by such other medical practitioner, such first-mentioned medical practitioner shall send to the Commissioner in a sealed envelope marked "confidential" a notice of the facts in the prescribed form.

(2) Any medical practitioner contravening this section shall be liable to a penalty not exceeding twenty pounds, and for a second or any subsequent offence to a penalty of not less than twenty pounds, but not exceeding one hundred pounds.

11. (1) Every medical practitioner who attends, treats, or advises any person for or in respect of any venereal disease from which such person is suffering, shall (except in the case of a child)—

(a) by written notice in the prescribed form delivered to such person—

(i) direct such person's attention to the infec-

tious nature of the disease, and to the legal consequences of infecting others; and

- (ii.) warn such person against contracting any marriage until certified under this Act as cured; and

- (b) give such person such printed information as may be prescribed regarding the disease and the duties of persons suffering therefrom.

(2) Every medical practitioner who attends, treats, or gives advice with respect to a child suffering from venereal disease shall give to the parent or guardian or other person in charge of the child such directions and printed information as may be prescribed.

(3) Any medical practitioner contravening this section shall be liable to a penalty not exceeding five pounds.

12. If a medical practitioner has reason to believe that a person suffering from venereal disease intends to contract a marriage, it shall be lawful for such medical practitioner, after giving an intimation of his intention to the person suffering from such disease, to inform any person, whom he believes on reasonable grounds to be the other party to the proposed marriage, that the person suffering from such disease is so suffering, and he may also give the like information to any parent or guardian of such party and to the Commissioner, and every communication made in good faith in exercise or supposed exercise of the powers conferred by this section shall be absolutely privileged.

13. Any person who, while suffering from any venereal disease in an infectious stage, marries, knowing that he is so suffering, shall be guilty of an indictable offence, and shall be liable on conviction to imprisonment with or without hard labour for a period not exceeding five years or a fine not exceeding five hundred pounds, or both fine and imprisonment.

14. (1) When any person who has been suffering from venereal disease becomes cured of or free from such disease, or has ceased to be liable to convey infection, any medical practitioner, on being satisfied thereof shall, subject to the provisions of this Act and the regulations thereunder, give such person, at his request, a certificate in the prescribed form that such person is cured of or is free from venereal disease, or is no longer liable to convey infection, as the case may be.

(2) Any medical practitioner who gives to any person a certificate that such person is cured of or is free from venereal disease, or is no longer liable to convey infection, knowing the said certificate to be false in any material particular, or except under the conditions and in the circumstances prescribed with respect to such certificates by regulations under this Act, shall be liable to a penalty not exceeding fifty pounds.

15. Any person who uses for the purposes of or in relation to or in connexion with prostitution any certificate given by a medical practitioner under the provisions of the last preceding section shall be liable to a penalty not exceeding twenty pounds.

16. (1) Any parent, guardian, or other person in charge of any child suffering from venereal disease shall cause such child to be treated for such disease in accordance with the provisions of this Act.

(2) When any child is or becomes liable under this Act to do or submit to any act, matter, or thing, any parent or guardian or other person in charge of such child, knowing that such child is so liable, shall exercise his authority to compel or induce such child to do or submit such act, matter, or thing as aforesaid.

(3) Any parent or guardian or other person in charge of any such child who knows that such child has failed to comply with any provision of this Act shall report the fact, together with such particulars as may be prescribed, to the Commissioner.

(4) Any parent, guardian, or other person contravening this section shall be liable to a penalty not exceeding ten pounds.

17. (1) Any person who, knowing himself to be suffering from any venereal disease in an infectious stage, works in or about any factory, shop, hotel, restaurant, house, or other place in any capacity requiring him to handle food intended for human consumption shall be guilty of an offence, and shall be liable on summary conviction to imprisonment for a period not exceeding one year, or to a fine not exceeding one hundred pounds.

(2) Any person who knowingly employs or continues to employ any person suffering from a venereal disease in an infectious stage at any work or in any capacity requiring him to handle food intended for human consumption shall be liable to a penalty of not less than twenty pounds and not exceeding one hundred pounds.

18. [17.] No certificate, notice, or other communication, verbal or in writing, given by any medical practitioner for the purposes to this Act, bona fide and without negligence, that any person is suffering from venereal disease shall be made the ground of any legal proceedings, civil or criminal, against such medical practitioner.

19. [18.] (1) Any matter to be heard by a magistrate under this Act shall be heard and decided in chambers, and in private, and no person other than the magistrate, the party concerned, the Commissioner, and such officers, witnesses, or persons as the magistrate may require, or at the request of the party concerned may permit to be present, shall have access to or be permitted to be present in any room where the matter is being heard.

(2) Every person who acts or assists in the administration of this Act, and every person present in any room where any matter under this Act is being heard, shall preserve and aid in preserving secrecy with regard to all matters and things which come to his knowledge while so acting or assisting, or present, and shall not communicate any such matter or thing to any other person, except in the performance of his duties under this Act, or in answer to some question which he is legally bound to answer.

(3) Any person contravening this section shall be liable to a penalty not exceeding fifty pounds.

20. [19.] (1) It shall not be lawful to publish in any newspaper the report of any proceeding or matter heard in private under this Act, but this prohibition shall not extend to any reports which are published on the written authority of the Commissioner.

(2) Any person contravening this section shall be liable to a penalty not exceeding fifty pounds.

21. [20.] Any person who knowingly infects any other person with a venereal disease, or knowingly does or permits or suffers to be done any act likely to lead to the infection of any other person with such a disease shall be liable to a penalty not exceeding one hundred pounds, or to imprisonment with or without hard labour for a term not exceeding twelve months, or to both such penalty and such imprisonment.

22. [21.] Any person who, being the owner or occupier of any house, room, or place, knowingly permits any female suffering from venereal disease to occupy such house, room, or place for the purpose of prostitution, or to resort thither for such purpose, shall be guilty of an offence under this Act and shall be liable to a penalty not exceeding one hundred pounds, or to imprisonment with or without hard labour for a term not exceeding twelve months: Provided that no conviction under this section shall exempt the offender from any penal or other consequences to which he may be liable for keeping or being concerned in keeping a bawdy-house or disorderly house or for the nuisance thereby occasioned.

23. [22.] The Director-General of Public Health, or if there is no person holding that office a) A medical practitioner appointed by the Governor shall be the Commissioner under this Act.

24. [23.] (1) The Minister may arrange with the managers of any hospital receiving aid from the State to make effective provision as prescribed for the reception, accommodation, examination and treatment free of charge of such numbers of persons, or such classes of persons, suffering from venereal disease as are prescribed.

(2) In case of default, the Treasurer may withhold the whole or any portion of any subsidy which would be payable from the Consolidated Revenue in respect of such hospital during the current or the next financial year.]

25. [24.] (1) No person shall publish any statement, whether by way of advertisement or otherwise, to promote the sale of any article as a medicine, instrument or appliance for the alleviation or cure of any venereal disease, or disease affecting the generative organs or functions, or of sexual impotence, or of any complaint or infirmity arising from or relating to sexual intercourse, or of female or menstrual irregularities.

(2) Any person who—

- (a) affixes or inscribes any statement on any thing what-

soever so as to be visible to persons being in or passing along any street, road, highway, pathway, public place, or public conveyance; or

- (b) delivers or offers, or exhibits any statement to any person being in or passing along any street, road, highway, pathway, public place, public conveyance; or
- (c) throws any statement into or upon any street, road, highway, pathway, public place or public conveyance, or into the area, yard, garden or inclosure of any house; or
- (d) exhibits any statement to public view in any house, shop or place; or
- (e) prints or publishes any statement in any newspaper; or
- (f) sells, offers or shows or sends by post any statement to any person,

shall be deemed to have published that statement.

(3) The word statement includes any document, book, or paper containing any statement.

[4] Books, documents and papers published in good faith for the advancement of medical or surgical science are exempt from the provisions of this section.]

(4) [(5)] Any person contravening this section shall be liable to a penalty not exceeding fifty pounds.

Provided that nothing in this section shall apply to any books, documents or papers published in good faith for the advancement of medical or surgical science, or to any advertisement, notice or recommendation published by the authority of the Commissioner, or to any publication sent only to medical practitioners or to registered pharmaceutical chemists for the purposes of their business.

26. [25.] (1) A stipendiary or police magistrate may, subject to the provisions of this Act, authorize by special warrant any constable or police officer to enter into any house, office, shop, room, or other place, not being the house, office, shop, room, or surgery of a medical practitioner, or of a registered pharmaceutical chemist, and to search for, seize and bring before any such magistrate all articles, medicines, instruments, or appliances found therein which are capable of being used for the alleviation or cure of any venereal disease.

(2) No such warrant shall be issued except upon complaint made on oath by the Commissioner that he has reason to believe and does believe that such articles, medicines, instruments, or appliances are kept, held, or exhibited in such house, office, shop, room, or place, for the purpose of sale or unlawful use.

(3) The constable or police officer to whom any such special warrant is issued may, if necessary, obtain assistance and use force by breaking open doors or otherwise in order to effect an entrance.

(4) Whenever any such articles, medicines, instruments, or appliances are seized and brought before a magistrate in pursuance of any such special warrant such magistrate shall thereupon issue a summons calling upon the occupier of the house, office, shop, room or other place entered by virtue of such warrant to appear within seven days before such magistrate to show cause why the articles, medicines, instruments and appliances so seized should not be destroyed or forfeited.

(5) The magistrate issuing such summons shall—

- (a) if the occupier or some other person claiming to be the owner of the articles, medicines, instruments or appliances seized does not appear within the time limited; or
- (b) if the occupier or such other person appears and it is found that the articles, medicines, instruments, or appliances seized or any of them are of the character stated in the warrant, and kept, held, or exhibited for the purpose of sale or unlawful use,

order them, or any of them, to be destroyed or forfeited.

(6) The magistrate shall, if satisfied that the articles, medicines, instruments and appliances seized are not of the character stated in the warrant, or are not kept, held, or exhibited for the purpose of sale or unlawful use, direct them to be restored to the occupier of the house, office, shop, room, or other place in which they were seized, or to the person appearing to be the owner thereof.

27. [26.] The Minister [may] shall—

- (a) establish hospitals or places for the reception and treatment of persons suffering from venereal disease;

- (b) arrange for the examination or treatment by medical practitioners of persons suffering from venereal disease and for the remuneration of the practitioners under any such arrangement;

- (c) provide by regulation for the reception, examination and treatment of such persons at such hospitals and places or by such medical practitioners free of charge;

- (d) [(c)] arrange for chemical, bacteriological and other examinations and investigations free of charge to the patient for the purpose of ascertaining whether a person is suffering from, or is cured of or is free from venereal disease, or is no longer liable to convey infection, and for the remuneration payable under any such arrangement;

- (e) [(d)] arrange for the supply of drugs, medicines and appliances for the treatment, alleviation and cure of venereal disease in the case of persons unable, through poverty or otherwise, to pay for such drugs, medicines, or appliances; and

- (f) [(e)] provide for the preparation and distribution of information relating to venereal disease.

28. [27.] No prosecution or proceeding for the recovery of penalties under this Act or any regulation thereunder shall be instituted except by the Commissioner or some person thereunto authorized in writing by the Commissioner, either generally or in the particular case:

Provided that nothing herein contained shall affect any right to institute proceedings independently of this section in respect of any act or omission which is an offence at common law or under some Act other than this Act.

29. Without limiting the operation of the provisions of this or any other Act, every person who, without legal justification or excuse, falsely alleges, whether by words or otherwise, that any other person is suffering or has suffered from venereal disease (whether the form of such disease is specified or not), shall be guilty of the offence of publishing a defamatory libel, and the provisions of the Defamation Act, 1912, as to the offence of publishing a defamatory libel, shall apply accordingly.

30. This Act shall commence and take effect on a date to be proclaimed by the Governor. In such proclamation the Governor may declare a date or dates upon which this Act shall come into operation either generally throughout New South Wales or throughout any area or areas which may be defined in such proclamations.

31. (1) If a children's court established under the provisions of the Neglected Children and Juvenile Offenders Act, 1905, has reason to believe that a child, male or female, is suffering from venereal disease, the court may, at any time either before or after committal of such child, order an examination to be made of such child by a medical practitioner, either male or female.

(2) In the event of the medical practitioner reporting that any child is so suffering, the court shall forthwith notify the Commissioner in writing, who may thereupon deal with such child as provided in this Act.

32. (1) No child shall be boarded out under the provisions of the State Children Relief Act, 1901, unless the child has been—

- (a) examined by a medical practitioner; and
- (b) certified by such medical practitioner as being free from venereal disease, or no longer liable to convey infection.

(2) Such certificate shall be obtained at the expense of the State Children's Relief Board, and retained by it.

(3) Any person contravening this section shall be liable to a penalty not exceeding twenty pounds.

33. [28.] The Governor may make regulations for or with respect to all matters necessary or convenient to be prescribed for carrying out the provisions of this Act.

(2) In any regulations which the Governor may make under this Act a penalty not exceeding twenty-five pounds may be imposed for the breach of any such regulation. Any such penalty may be recovered before a stipendiary or police magistrate or any two justices of the peace in petty sessions.

(3) All regulations made under this section shall—

- (a) be published in the "Gazette";
- (b) take effect from the date of publication or from a later date to be specified in such regulations;
- (c) be laid before both Houses of Parliament within four—

teen days after publication if Parliament is in session; and, if not, then, within fourteen days after the commencement of the next session;

- (d) if either House of Parliament passes a resolution at any time within fifteen sitting days after such regulations have been laid before such House disallowing any regulation, such regulation shall thereupon cease to have effect.

THE RATTAN COMMISSION.

His Honour Judge Ewing, sitting as a Royal Commission, resumed his enquiry, which had been adjourned on November 18, 1918, in order that information might be obtained from the Attorney-General of the State of Illinois (see *The Medical Journal of Australia*, November 30, 1918, pp. 458-460). He stated that he had not received a reply to his cable, but that he had made certain enquiries in Sydney and Melbourne. He called attention to the documents which Mr. Lodge had placed before him. Among these was the *American Medical Journal* of 1906, in which the Harvey College was described as extinct. He found, however, that in 1905, according to the same authority, the Harvey College admitted 37 candidates, and it would thus seem that the College was not dead or extinct. The note in the American publication to the effect that the Harvey College was extinct was inconsistent with a resolution of the Harvey-Jenner Medical University, passed by the Board of Directors on July 25, 1905, as follows:—

That this corporation retains Mr. J. C. O'Connor to negotiate for completing the affiliation with the Jenner Medical College, with full power to take such steps as are necessary in his judgement to carry into effect a union of the Harvey Medical University with the Jenner Medical College, so that the two schools may be one.

The next statement in the exhibit was dated July 1, 1905, to the effect that the Harvey-Jenner Medical University, incorporated in 1905, desired to announce its affiliation with the Jenner Medical College, and requested all students to sign for the session 1905-1906. The Commissioner said that it appeared to him that a college that did not exist, could not affiliate with another. It might be that the two institutions had placed themselves under a common control, while they continued as separate institutions. It was possible that the whole trouble had arisen by the mistake in the American publication, the word "extinct" being used instead of "affiliated." That might explain the contradictory cables.

Mr. Lodge claimed that the Secretary of the Council of Medical Education of the American Medical Association had definitely stated that the Harvey College had ceased to exist. The Commission suggested that that might be his view of affiliation. The Commissioner and Mr. Lodge disagreed in regard to whether the resolutions were carried into effect. Mr. Lodge further maintained that affiliation meant continued existence as an independent body. The diploma produced did not show any affiliation or amalgamation. The Harvey College had forfeited its charter in 1902 for neglecting to send in returns. The Commissioner retorted that in 1905 37 medical men received certificates from the College after the date of affiliation. Mr. Lodge again pointed out that in the American list, the reference was to the Jenner College and not to the Harvey-Jenner College. The Commissioner stated that there was little doubt that he would get information that the Harvey-Jenner College was in existence still. He had received information to that effect from the American Consul in Melbourne, who had also informed him that if information were not forthcoming from Illinois, he would obtain from the United States Government whatever information was possible. Therefore, if in the course of a few days he did not hear from Illinois, he would avail himself of that offer. Later he intimated that he would send a cable to the President and Secretary of the Harvey Medical College, as the persons who had signed the certificate, to the effect that he had before him a certificate signed by them and issued by the Harvey Medical College of Chicago, dated March 9, 1907. It was alleged that this College had ceased to exist before they signed the certificate. The enquiry was adjourned, pending information being received.

On December 7, 1918, the Commissioner resumed the enquiry. The originals of the cables were produced. They were as follows:—

The Commercial Bank of Tasmania to the Continental and Commercial Bank of Chicago (dated September 17, 1918):—

Instruct reputable member of your firm enquire was Harvey Medical College incorporated or chartered institution in 1907. Obtain and forward official certificate incorporation or charter that year from Springfield or other registrar or reputable office. Cable reply.

The Continental and Commercial Bank of Chicago to the Commercial Bank of Tasmania (dated October 1, 1918):—

In answer cable, have obtained official confirmation that Harvey Medical College, Chicago, was in 1907 duly chartered institution.

President of the Medical Council, Dr. Scott, to Secretary of the American Medical Association (dated October 10, 1918):—

Your letters of last year to Hayward, please cable date when Rattan joined Harvey College and when graduated. Reply paid.

Secretary of the American Medical Association to Dr. Scott (dated October 13, 1918):—

Rattan not recorded student graduate Harvey College. Dr. Scott, President of the Medical Council to the Secretary of the American Medical Association:—

Did Rattan ever attend Jenner College? He produces diploma of March, 1907, from Harvey only. Could this be regularly issued, and, if so, what qualifications?

Secretary of the American Medical Association to Dr. Scott:

Rattan not student graduate either Jenner or Harvey according to official lists.

The Commissioner remarked that the cable of October 13 inferred that the Harvey College existed. He held the opinion that the *American Medical Journal* was a very unsatisfactory and contradictory publication. The lists of American institutions contained did not pretend to be exhaustive, and one list was headed: "Considered worthy of inclusion." He (the Commissioner) had received information from Sydney that there were two Harvey Colleges, and it might be that when the Harvey College affiliated with the Jenner College, another Harvey College came into existence. In reference to Dr. Scott's last cable, it seemed to be an honest attempt to get at the bottom of the situation. The reply was no answer to the question whether the Harvey College existed and could issue a certificate. He thought that it was an extraordinary thing from a gentleman who lived in Chicago and was the Secretary of the American Medical Association. The diploma in question had been signed by the Dean of the Faculty, the Secretary of the Faculty, Dr. French, the President of the Board of Directors, and Dr. Warner, the Secretary of the Board of Directors. He had sent a cable to Dr. French and Dr. Warner as follows:

Have before me diploma of Victor Richard Rattan, issued by you and others on behalf Harvey Medical College, dated March, 1907. Did you issue same? And what are relations of Harvey Medical College and Harvey-Jenner Medical College. Herewith 25 dollars for cable.

He had received the following reply:—

Am looking up records. Will cable to-morrow. W. G. French.

A day later he received a further cable:—

Diploma issued Victor Richard Rattan, March, 1907, by me and others on behalf of Harvey College. No connexion with Harvey-Jenner College.

The Commissioner said that, although the Attorney-General had had a week longer than Dr. French to reply, he had not received a cable from him. He could not understand why a resident of Chicago could not say whether the college existed or not. He could not allow such an evasive reply to have any effect against the reply of reputable practitioners of Chicago.

The Commissioner put a few questions to Victor Richard Rattan, without calling on him to take the oath or to enter the witness box. Rattan stated that the diploma was issued to him by the Harvey Medical College, which was an existing institution in 1907. Mr. Lodge asked for permission to cross-examine him. The Commissioner wished to know in what respect. He pointed out that Mr. Lodge had not called him. He was charged with what would be a crime, for which he would be liable to a term of imprisonment. The question was then raised whether Rattan should be examined on oath. Mr. Hodgman made the complaint that he had never heard of such a charge on such information. Mr. Lodge maintained

that they had no information that the Harvey College was in existence in 1907. The Commissioner stated that if he had pursued the strict rules of evidence, he would have decided that the British Medical Association (presumably the Commissioner meant the Tasmanian Branch of the British Medical Association) had made a charge and that no evidence had been adduced in support of this charge. The prosecutors had made a very serious charge and they had not assisted him in the slightest in proving it.

Victor Richard Rattan was then sworn, and repeated his evidence to the Commissioner. Mr. Lodge then cross-examined him in regard to the Harvey College. He stated that he was not in America in 1905, and could not explain the statement that the Harvey College became extinct in that year. He had no knowledge of its constitution. The College was situated in Clark Street, Chicago. There was a staff of eight lecturers. The Commissioner refused to allow Mr. Lodge to question Rattan as to the course of study he underwent. He stated that he would not enquire into his qualifications. The Act of Parliament had settled that. Mr. Lodge claimed that the letter posted on October 2 in Chicago had not arrived, but his information was that there was not a *bona fide* Harvey College in 1907. The Commissioner retorted that in that case Dr. Rattan and four medical practitioners of Chicago had conspired to defraud the public and to impose a fraud upon the Medical Board. He would require some evidence to support such a proposition. The diploma set out that Rattan had completed the course of study required by the institution, had passed a satisfactory examination and had been recommended to the Faculty as qualified to practice medicine under the licence of the court. Mr. Lodge asked for an adjournment until the letter had been received. The Commissioner said that it would not be right to keep such a serious charge hanging over the head of any man. He did not consider Rattan guilty, and he would deliver his report to His Excellency the Governor that night.

Mr. Hodgman said that the British Medical Association had launched the charges and that it has suited the Medical Council to take them up, as the majority of the members of the latter body were members of the former. He submitted that there was ample evidence on which His Honour could come to a conclusion. The evidence was sufficient to enable him to say that the charges were launched without any foundation and with malice, and that Dr. Rattan had amply vindicated his position.

The report of the Commissioner will be dealt with in a subsequent issue.

Naval and Military.

HONOURS.

In the *London Gazette* of September 13, 1918, the following notice appears:—

Distinguished Service Order.

Major Leslie Gemmel Tassie, Australian Army Medical Corps. This officer set a fine example of coolness in going about amongst his stretcher-bearers, directing and encouraging them. Day and night he visited the regimental aid posts and loading posts, re-arranging bearer relays, and supervising the evacuation of wounded. Hearing there were several wounded in a village, which was being heavily shelled, he organized parties and cleared the village.

Military Cross.

Captain Geoffrey Penrose Arnold, Australian Army Medical Corps.—During a night counter-attack this officer formed his regimental aid post in the open just in front of the jumping-off line, and continued to dress wounded there for twenty-four hours under continuous fire. The medical officers of two other battalions both became casualties early in the attack, and he attended to the wounded of these battalions besides his own. His coolness and splendid work saved scores of lives.

Captain Ernest Noel Brougham Docker, Australian Army Medical Corps.—During an attack he followed up with his bearers, picked up guides, gained touch with the regimental aid posts, and organized a line of bearer relays. This was done at night under machine gun and heavy shell fire.

Captain Frank William Fay, Australian Army Medical Corps.—While in charge of the transport and evacuation of wounded from the divisional main dressing station, the station was twice hit by shells, but he succeeded in clearing all wounded, exposing himself in bringing up ambulance cars, and showing great energy and devotion to duty.

Captain Ewing George Thomson, Australian Army Medical Corps.—This officer tended wounded in the open from 4 a.m. to 11 a.m. one morning. During this period he was under very heavy high explosive and gas bombardment, but, although suffering from the effects of gas, he stuck to his aid post. His rapidity in evacuating wounded from the gassed area no doubt saved many lives.

Captain James Iver McIver Chirnside, Australian Army Medical Corps.—For conspicuous gallantry and devotion to duty while attending to wounded men under heavy shell and machine gun fire. During the retirement of the rearguard squadron, he attended to the wounded while the enemy were firing at a distance of 300 yards. He showed great devotion to duty.

Captain John Eric McGlashan, Australian Army Medical Corps.—While in charge of the evacuation of wounded during an attack, he visited his various posts under heavy shell and machine gun fire, and was largely responsible for the successful evacuation of the wounded.

Captain Hugh Compton Trumble, Australian Army Medical Corps.—Under heavy enemy barrage he pushed forward some 600 yards, with his medical personnel, to a ledge, where, by his capable organization, he successfully evacuated quantities of wounded. He worked for three days and nights, and his quiet courage had an excellent effect on wounded and stretcher-bearers alike.

APPOINTMENTS.

It is announced in the *Commonwealth of Australia Gazette*, No. 190, of December 12, 1918, that the following appointments, promotions, etc., have been confirmed by the Governor-General in Council:—

Australian Imperial Force.

First Military District.

Major T. C. C. Evans, D.S.O., 13th Field Ambulance, to be Deputy Assistant Director Medical Services, 4th Australian Division. Dated 31st August, 1918.

Second Military District.

Major C. L. Chapman, D.S.O. (now Deputy Assistant Director Medical Services, Head-Quarters Australian Corps) is posted for duty with Head-Quarters, Australian Imperial Force Depôts in United Kingdom, and to be temporary Lieutenant-Colonel whilst so employed. Dated 4th September, 1918.

Charles Reginald Ralston Huxtable, Australian Army Medical Corps, to be Captain. Dated 3rd September, 1918.

Third Military District.

Major M. W. Cave, Australian Army Medical Corps, resumed command of 1st Light Horse Field Ambulance, and to be temporary Lieutenant-Colonel whilst commanding. Dated 22nd June, 1918.

Major A. J. Collins, D.S.O., M.C., from 12th Field Ambulance, Australian Army Medical Corps, to be Deputy Assistant Director Medical Services, Head-Quarters Australian Corps. Dated 31st August, 1918.

Major E. F. Lind (now Deputy Assistant Director Medical Services, 4th Australian Division) to command 2nd Field Ambulance, and to be temporary Lieutenant-Colonel whilst so employed. Dated 1st September, 1918.

Francis Grene Power, Australian Army Medical Corps, to be Captain. Dated 3rd September, 1918.

Lieutenant-Colonel W. E. Summons, Australian Army Medical Corps, to command 14th Australian General Hospital, and is granted the temporary rank of Colonel whilst so employed. Dated 18th July, 1918.

Public Health.**NEW SOUTH WALES.**

The following notifications have been received by the Department of Public Health, New South Wales, during the ending November 30, 1918:—

Diseases.	Metropolitan Combined District, Cs. Dths.	Hunter River District, Cs. Dths.	Rest of State, Cs. Dths.	Total. Cs. Dths.
Enteric Fever ..	7 0 ..	3 0 ..	10 0 ..	20 0
Scarlatina ..	10 0 ..	1 0 ..	12 0 ..	23 0
Diphtheria ..	26 0 ..	3 0 ..	38 6 ..	67 6
*Pul. Tuberculosis	32 9 ..	4 1 ..	0 0 ..	36 10
C'bro-Sp'l Menin.	2 0 ..	1 0 ..	1 0 ..	4 0

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending December 1, 1918:—

Diseases.	Metropolitan, Cs. Dths.	Rest of State, Cs. Dths.	Total Cs. Dths.
Enteric Fever ..	0 0 ..	5 0 ..	5 0
Scarlatina ..	25 0 ..	11 0 ..	36 0
Diphtheria ..	49 1 ..	45 0 ..	94 1
Pulmonary Tuberculosis	13 3 ..	24 11 ..	37 14
C'bro-Spinal Meningitis	1 — ..	0 — ..	1 —

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending November 30, 1918:—

Diseases.	No. of Cases.
Enteric Fever ..	12
Scarlatina ..	1
Diphtheria ..	26
Pulmonary Tuberculosis	7
Cerebro-Spinal Meningitis	2
Erysipelas ..	2

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the week ending November 23, 1918:—

Diseases.	Adelaide, Cs. Dths.	Rest of State, Cs. Dths.	Total, Cs. Dths.
Enteric Fever ..	0 0 ..	2 0 ..	2 0
Scarlatina ..	3 0 ..	36 0 ..	39 0
Diphtheria ..	7 0 ..	17 0 ..	24 0
Pulmonary Tuberculosis	2 0 ..	4 4 ..	6 4
Erysipelas ..	1 0 ..	3 0 ..	4 0
Morbilli ..	1 0 ..	10 0 ..	11 0
Pertussis ..	3 0 ..	35 0 ..	38 0

WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending November 16, 1918:—

Diseases.	Metropolitan, Cases.	Rest of State, Cases.	Totals, Cases.
Enteric Fever ..	1 ..	2 ..	3
Scarlatina ..	9 ..	7 ..	16
Diphtheria ..	6 ..	7 ..	13
Pulmonary Tuberculosis	2 ..	1 ..	3
Malaria ..	2 ..	0 ..	0

TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the fortnight ending November 30, 1918:—

Diseases.	Hobart, Cases.	Launceston, Cases.	Country, Cases.	Whole State, Cases.
Enteric Fever ..	2 ..	1 ..	1 ..	4
Diphtheria ..	0 ..	4 ..	5 ..	9
Pulmonary Tuberculosis	2 ..	3 ..	4 ..	9

NEW ZEALAND.

The following notifications have been received by the Chief Health Officer, Department of Public Health, Hospitals and Charitable Aid, New Zealand, for the four weeks ending November 11, 1918:—

Diseases.	No. of Cases.
Scarlatina ..	81
Diphtheria ..	246
Enteric Fever ..	12
Pulmonary Tuberculosis	91
Cerebro-Spinal Meningitis	25
Puerperal Fever ..	8
Erysipelas ..	11
Ophthalmia Neonatorum	2
Trachoma ..	1
Influenza ..	114

The number of cases of influenza notified in New Zealand during the four weeks ending December 2, 1918, is as follows:—

Week ending—	Auckland, Cases.	Wellington, Cases.	Canterbury, Cases.	Otago, Cases.
November 11, 1918..	—	97	14	3
November 18, 1918..	—	219	258	120
November 25, 1918..	—	220	140	358
December 2, 1918 ..	—	376	255	398

The total number of cases notified in the Wellington, Canterbury and Otago Health Districts during the four weeks is thus 2,458.

PNEUMONIC INFLUENZA.

A special issue of the Bulletin of the Quarantine Service has been issued under date of December 5, 1918. This pamphlet contains an account of the clinical types and symptoms of the pneumonic influenza, written by Dr. A. W. Dean, who has had an extensive experience of the disease at the Quarantine Station at Sydney. The text of the document was published in *The Medical Journal of Australia* last week (page 496).

A medical practitioner of the name of Francis Leonard Harden, registered in 1912 by the New South Wales Medical Board, in virtue of a certificate purporting to be a diploma of the Cooper Medical College of California, was called upon by the Medical Board to show cause why his name should not be removed from the Register, on the ground that he did not possess the qualifications in respect of which he was registered. The Medical Board, after considering the evidence on November 28, 1918, directed that the name of Francis Leonard Harden should be removed from the Register.

Correspondence.**THE TREATMENT OF RETURNED MEN.**

Sir,—In your issue of December 7, your anonymous correspondent, "Returned Man," has taken the liberty of attributing to me views and statements which, if authentic, would involve an unjust and cruel slur on the medical student body of our University.

In order to support his argument upon a matter with which I am not now concerned, your correspondent proceeds as follows: "At the present time, when every eligible pat-

riotic man should be on active service, the medical school has 680 students, largely eligible. Professors Welsh and Wilson openly characterize this as a scandal, and state that the bulk of these have entered medical courses not from love of the profession, but because in the event of conscription, they would have been exempt." It is utterly untrue that I ever gave utterance of these alleged views, either in public or in private. Nor did I ever inwardly give credence to them. The only possible pretext for quoting opinions of mine on this subject could be the occurrence of the following words, contained in a letter I wrote to the *Sydney Morning Herald* on May 30 last: "As matters stand, it is, for some of us, at least, uncomfortable to realize that at this period of our greatest need of fighting men, the University Medical School is fuller than ever, etc." I appeal to the candid reader to say whether these words in any degree whatever justify the calumnious statement attributed to me (and I believe it to be equally false as attributed to my colleague, Professor Welsh), that "the bulk of these (680 medical students) have entered medical courses not from love of their profession, but because in the event of conscription, they would have been exempt".

It may be well to supplement this repudiation of a false statement by explaining what my words actually did seek to imply. This was, simply, that in my opinion the then recent removal on an official embargo by the Department of Defence on the enlistment of medical students, should solve the pressing personal problem of duty for many of these students, and should end a situation uncomfortable for some of us to contemplate, in view of the depleted Universities in other parts of the Empire. I never thought—and, indeed, I had had good reason to believe the contrary—that our medical students were cravenly seeking shelter behind the screen of an exempted occupation. It is, of course, possible that this may have been true of a few cases. There are mean souls, as there are dishonest characters, to be met with in any body of some hundreds of men. But I am confident that such cases were quite exceptional. I resent most emphatically the gross misrepresentation (I do not suggest that it was intentional) conveyed by the language of your correspondent. He should learn that one of the first essentials in public correspondence is the accurate verification of statements professing to set forth the views of others. In the present instance he will, I trust, be sorry to realize that he has most injuriously travestied them.

Yours, etc.,

J. T. WILSON.

University of Sydney,
December 10, 1918.

CONGRESS OF EYE, EAR, NOSE AND THROAT SPECIALISTS.

Sir,—Might I appeal to all who took part in the recent Congress to send in their papers and a résumé of their remarks during discussions at once? We must publish our deliberations in January at the latest, and no communications can be included which do not reach me by January 7.

Yours, etc.,

W. KENT HUGHES.

22 Collins Street, Melbourne.
December 12, 1918.

INOCULATION AGAINST PNEUMONIC INFLUENZA.

Sir,—As one who has spent some years in study of the ways in which antibodies are formed, I have been asked to state what vaccine should be used against pneumonic influenza. Inoculation is recommended in New South Wales by the Federal Quarantine Service and by the State Department of Public Health. The officials of the Commonwealth at first suggested the employment of polyvalent coryza vaccine, made in the following doses:—

"A" strength, per c.cm.

<i>M. catarrhalis</i>	25 millions
Pneumococcus	10 millions
Streptococcus	10 millions
Gram-positive diplococcus	10 millions

(Isolated from all the cases examined.)

"B" strength, per c.cm.

<i>M. catarrhalis</i>	125 millions
Pneumococcus	50 millions
Streptococcus	50 millions
Gram-positive diplococcus	50 millions

Rumour informs me that one of the nurses who died from the disease, had been inoculated with the vaccine on entering quarantine. Presumably other members of the quarantine staff have been protected (?) with the same vaccine. Recently these vaccines, made in the Commonwealth Serum Laboratories, Royal Park, Melbourne, have been converted into influenza vaccines (mixed) by the addition of *B. influenzae*, 25 millions, to the "A" strength and 125 millions to the "B" strength. The Quarantine Service suggests two doses of 1 c.cm. of "A" and "B" strengths at an interval of five to seven days.

The Director-General of Public Health, New South Wales, issues a mixed vaccine for treatment of virulent influenza, which the Minister of Health, with the advice of the consultative committee nominated by the Council of the New South Wales Branch of the British Medical Association, recommends for the general inoculation of the public. The vaccine contains in 1 c.cm.:—

Pneumococcus	1,000 millions
Influenza bacillus	100 millions
Streptococcus	100 millions
Staphylococcus aureus	250 millions
Gram-negative micrococcus	250 millions

It was at first suggested that an initial dose of 0.5 c.cm., followed seven days later by a dose of 1 c.cm., should be employed subcutaneously; later the initial dose was reduced to 0.25 c.cm.

In reference to the use of these vaccines, it may be pointed out that there has been no satisfactory demonstration that any immune substances of the nature of antibodies, whether agglutinin, bactericidal body or aught else, are produced by repeated inoculation with dead or living influenza bacilli. Some weight may be attached to this failure to show the existence of antibodies, since it is notorious that persons are not protected against subsequent attacks of influenza by an attack of the disease.

The value of inoculation with pneumococcal vaccine cannot be determined, but five strains of the organism are known, and inoculation with one strain offers no protection whatever against an infection with another strain. I am creditably informed that the strains of pneumococci in these vaccines have not been identified. Inoculation with the other organisms will be of value to the inoculated person if the race of microbe is identical with the agent causing illness.

No one can doubt that we know far too little of the micro-organisms producing pneumonic influenza to institute the means that would be most efficient in controlling infection. Greater opportunity of studying the bacteriology of those infected with pneumonic influenza should be provided, and the Federal and State Departments might consider the advisability of permitting bacteriologists other than those in their employment to investigate this epidemic.

Many have urged me not to oppose inoculation with these vaccines, as the injections can do no harm. May I point out that I have invariably found that an animal previously injected with some other protein, toxin or organism, does not give such a considerable formation of antibodies as an animal in good health not infected with any other microbe. My experience is not in any way exceptional, and most of those who have endeavoured to measure the formation of antibodies, have found that any infective process leading to the formation of antibodies against the contaminating microbes lessens the amount of specific antibody. It would thus appear that inoculation may lessen the resistance of the patient to an attack of the disease, if the organisms used in the vaccines are not those infecting the patient.

Yours, etc.,

HENRY G. CHAPMAN.

University of Sydney,
December 14, 1918.

THE PROTECTIVE VALUE OF MASKS.

Sir,—We are told to wear a mask over the nose and mouth as a means of protection from the influenza bacillus, but no mention is made of the eye as an agent of infection. Now,

the absorptive power of the conjunctiva is great, and, if that fails, the nasal duct could easily send the germs into the nares and air passages generally. The rational thing to do, therefore, would be to wear something like a gas mask.

Yours, etc.,

"CETEHAM."

December 15, 1918.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

The following have been registered under the provisions of the *Medical Act, 1912 and 1915*, as duly qualified medical practitioners:—

- Aitken, Adele Lindsay, M.B., Mast. Surg., 1918, Univ. Sydney.
 Ford, John William, M.B., 1918, Univ. Sydney.
 McLelland, Isabella, M.B., Mast. Surg., 1918, Univ. Sydney.
 Donovan, Francis Gerald, M.B., Bac. Surg., 1917, Univ. Melbourne.
 O'Sullivan, Joseph Ernest, M.B., Bac. Surg., B.A.O., National University of Ireland, 1913.

VICTORIA.

The following have been registered under the provisions of Part I. of the *Medical Act, 1915*, as duly qualified medical practitioners:—

- Cookson, Reginald George, George Hotel, Ballarat, L.R.C.P., Lond., 1887.
 Sanderson, John Murray, c/o W. Ramsay, 80 Swanston Street, Melbourne, L.S.A., Lond., 1898.
 Russell, Walter McRae, "Leagur," 24 Howard Street, Kew, M.B. et. Ch.B., Melb., 1913.
 Alteration of name in the Register:—
 Soroklewich, Michael Harold, altered to that of Southwick, Michael Harold.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xv.
 Hospital for Sick Children, Brisbane, Honorary Assistant to the Honorary Throat, Nose and Ear Specialist.
 Royal Alexandria Hospital for Children, Camperdown, Honorary Urologist.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other contract practice. Australian Prudential Association Proprietary, Limited. National Provident Association. Mutual National Provident Club.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital. Aramac Hospital.

Branch.	APPOINTMENTS.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments in South Australia. Contract Practice, Appointments at Renmark.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

- Dec. 26.—S. Aust. Branch, B.M.A.
 Jan. 7.—N.S.W. Branch, B.M.A., Council (Quarterly).
 Jan. 10.—S.A. Branch, B.M.A., Council.
 Jan. 14.—Tas. Branch, B.M.A., Annual Meeting.
 Jan. 14.—N.S.W. Branch, B.M.A., Ethics Committee; Executive and Finance Committee.
 Jan. 16.—Vic. Branch, B.M.A., Council.
 Jan. 18.—Queensland Branch, B.M.A., Council.
 Jan. 21.—N.S.W. Branch, B.M.A., Medical Politics Committee.
 Jan. 29.—Vic. Branch, B.M.A., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.